LBT-A50/A50CD/A50CDM

SERVICE MANUAL

E Model

LBT-A50CD/A50CDM

Australian Model

LBT-A50CD

LBT-A50CD

These systems are composed of following models. As for the service manual, it is issued for each component model, then, please refer to it.

COMPONENT MODEL NAME FOR THESE SYSTEM

	LBT-A50	LBT-A50CD	LBT-A50CDM						
Tuner		ST-A70							
Amplifier		TA-A50							
Cassette deck	TC-D507								
CD player	CDP-M43 or CDP-C422M	CDP-M43	CDP-C422M						
Remote commander		RM-S571							
Speakers	SS-D55AV								

PARTS LIST

 Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Part No.	Description	Remarks
1-501-374-11	ANTENNA,	LOOP
1-559-533-11	CORD, CON	INECTION (TA-CDP) (A50CDM)
1-574-314-11	CORD (WI	TH CONNECTOR) (ST-CDP)
1-590-822-11	CORD (WIT	H CONNECTOR) (ST-TA-TC)
1-590-823-11	CORD (WIT	TH CONNECTOR) (ST-TA-TC)
1-693-032-11	COMMAND	ER, STANDARD (RM-S571)
1-690-727-11	CORD (SPE	EAKER)

Part No.	Description	Remarks	
3-707-584-01	COVER, BATTERY	(RM-S571)	
3-754-664-71	MANUAL, INSTRU	CTION	
	(English, Fre	ench, Spanish, Chinese)	
3-754-847-11	MANUAL, INSTRU	CTION	
	(English, Fre	nch, Spanish, Portuguese)	(A50 CDM)
4-951-716-01	INDIVIDUAL, CARTO	N (A50: Australian)	
× 4-952-999-01	INDIVIDUAL, CARTO	N (A50CD)	
4-953-000-01	INDIVIDUAL, CARTO	N (A50CDM)	
4-953-921-01	INDIVIDUAL, CART	ON (A50: Malay)	



92G1614-1 Printed in Japan © 1992.7

ST-A70

SERVICE MANUAL

6318 E Model Australian Model Tourist Model



This set is the TUNER section in LBT-A50/A50CD/A50CDM/A60/A60CD/A60CDM/A70/A70CD/A70CDM.

SPECIFICATIONS

System

FM tuner section Tuning range Antenna Intermediate frequency AM tuner section Tuning range

Antenna

Intermediate frequency

FM stereo FM/AM superheterodyne tuner

87.5 to 108 MHz 75 ohms unbalanced 10.7 MHz

MW: 531 to 1,602 kHz LW: 153 to 279 kHz AM loop antenna External antenna terminal 450 kHz

Power requirements Power consumption AC outlet Weight

Dimensions

240 V AC, 50/60 Hz 10 W 2 switched, total 450 W max. Approx. 2.7 kg (6 lbs 5 oz) Approx. 355 x 95 x 310 mm (14 x 33/4 x 121/4 inches) (w/h/d, including projections)

Design and specifications are subject to change without notice.

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.



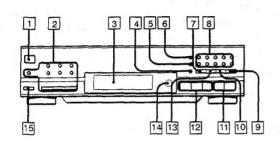
FM STEREO/FM-AM TIMER TUNER SONY

SECTION 1 GENERAL

This section is extracted from instruction manual.

TOWNS TO THE PROPERTY.

Location of Controls



SYSTEM POWER switch (8) Buttons for setting the clock and timer (40, 42) Display window MEMORY button (14) MEMORY SCAN button (16) AUTO TUNING button (12) DISPLAY button (16, 40) Numeric buttons (14) BAND selector (12) ST/MUTE button (12) TUNING +/- buttons (12) 12 13 14 15 SHIFT buttons (A, B, C) (14) CHARACTER button (15) Remote sensor

SLEEP button (41)

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK A OR DOTTED LINE WITH MARK A ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUB-LISHED BY SONY.

SECTION 2 ELECTRICAL ADJUSTMENTS

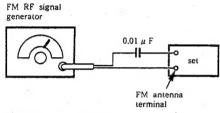
2-1. FM SECTION

FM NULL Adjustment

Setting:

BAND switch: FM

Procedure:



Carrier frequency: Output level:

98MHz

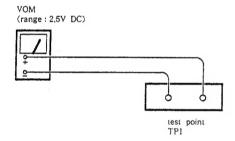
Modulation:

1mV (60dB) 1kHz, 75kHz deviation (100%)

Tune the set to 98MHz.

Adjust T21 for a OV reading on the VOM,

Note: When the ceramic filter is replaced, these adjustments should be made.



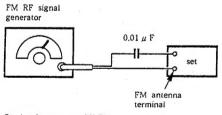
STEREO Indication Lighting Level Adjustment

Setting:

STEREO/MUTE switch: OFF

BAND switch:

Procedure:



Carrier frequency: 98MHzOutput level: $17.9\,\mu\text{ V}$ (25dB)

Modulation:

Audio (1kHz): 33,75kHz deviation (45%) Pilot (19kHz): 7,5kHz deviation (10%) Sub-channel (38kHz): 33,75kHz deviation (45%)

1. Tune the set to 98MHz.

Adjust RV24 so that the STEREO indicator goes on,

FM Stereo Separation Adjustment

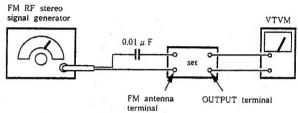
Setting:

STEREO/MUTE switch: ON (STEREO)

BAND switch:

FM

Procedure :



Carrier frequency: 98MHz lmV (60dB) Output level: Mode: Stereo

Modulation: Audio (1kHz):

33.75kHz deviation (45%) Pilot (19kHz): 7.5kHz deviation (10%)
Sub-channel (38kHz): 33.75kHz deviation (45%)

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	A
R-CH	L-CH	Adjust RV21 for minimum reading.
R-CH	R-CH	0
L-CH	R-CH	Adjust RV21 for minimum reading,

L-CH Stereo separation : A - B R-CH Stereo separation: O - D

The separations of both channels should be equal,

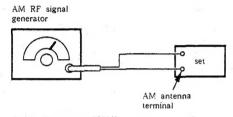
2-2. AM SECTION

SIGNAL LEVEL METER Lighting Level Adjustment

Setting:

BAND switch: AM

Procedure:

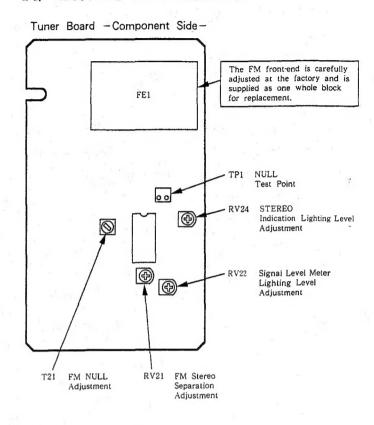


Carrier frequency: 999kHz Output level: 94dB μ , m Modulation: 400Hz, 30% modulation

Tune the set to 999kHz,

Adjust RV22 until the scale-5 on SIGNAL METER indicator lights up.

2-3. ADJUSTING PARTS LOCATION



SECTION 3 DIAGRAMS

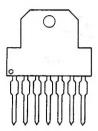
3-1. SEMICONDUCTOR LEAD LAYOUTS

arefully and is block

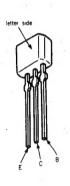
ing Level

er

LA5667



2SC2785-HFE



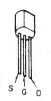
2SB1116A-L



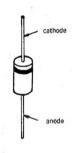
2SC2603-EF 2SC2669-OY 2SC3113-AB DTA114ES DTC114ES DTC124ES



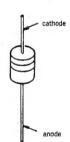
2SK246-GR3



1N4148M 10E2N



HZS30-2L UZP-5.6B

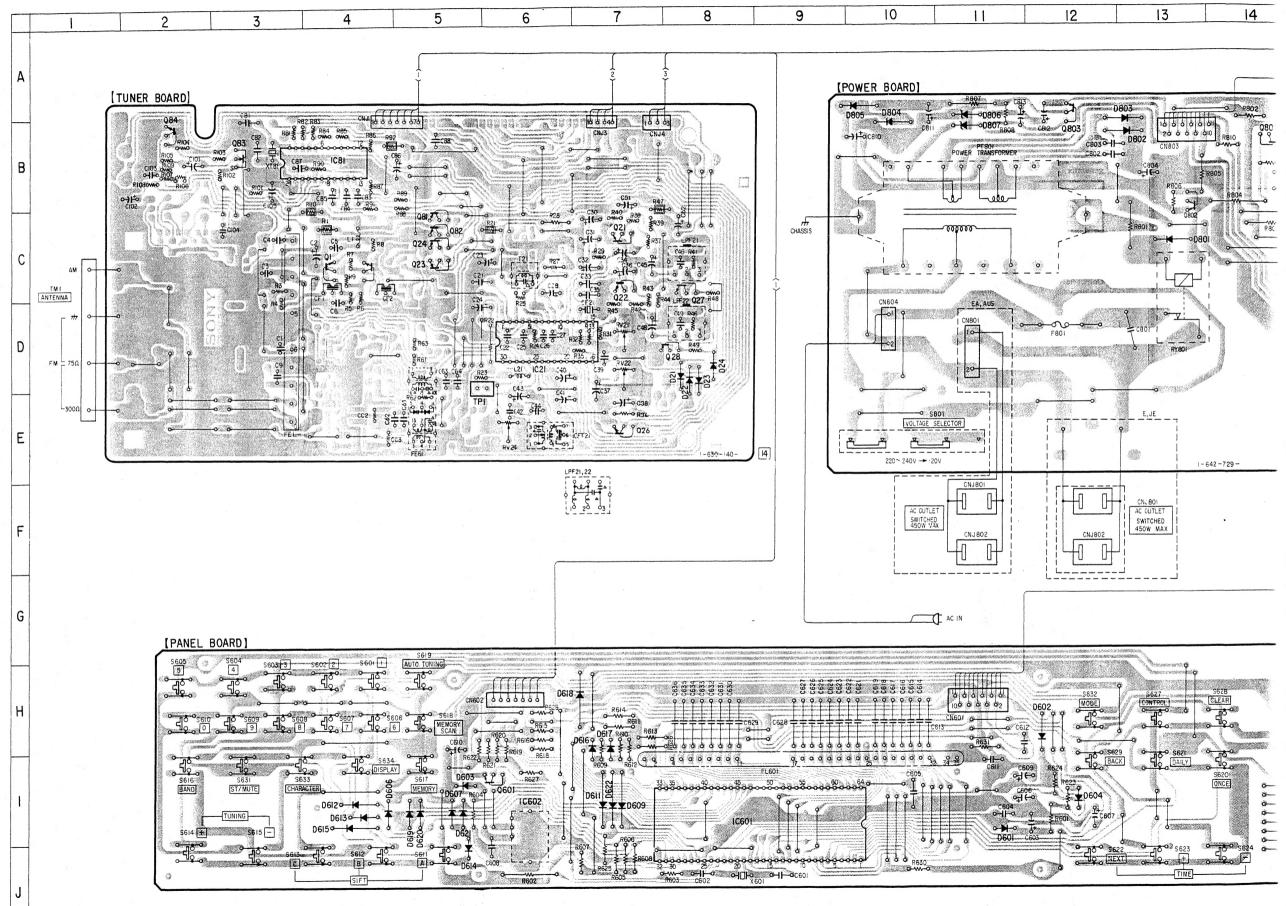




3-2. PRINTED WIRING BOARDS

Semiconductor Location

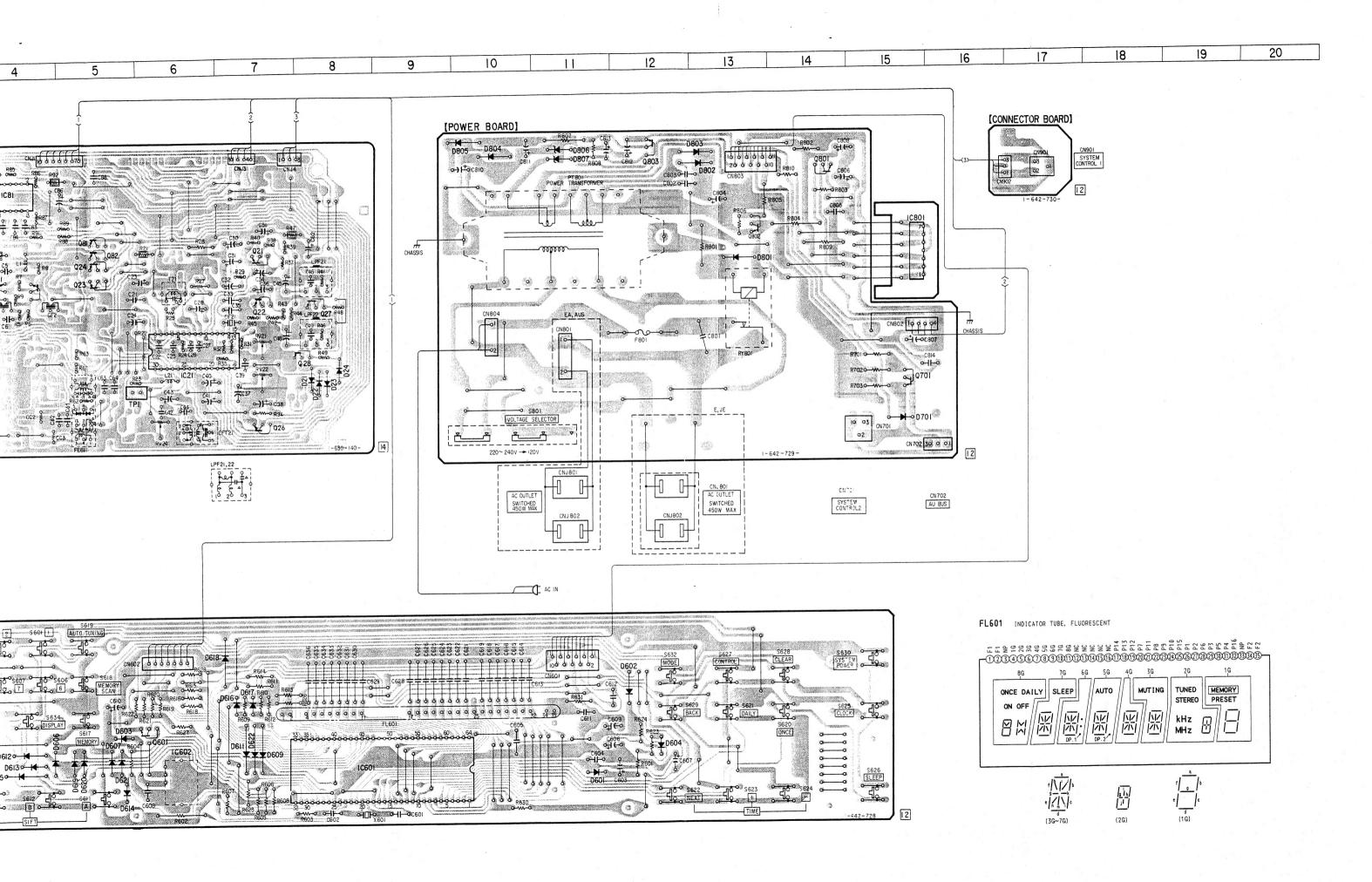
Ref. No.	Location	Ref. No.	Location
D21 D22 D23 D24 D601 D602 D603 D604 D606 D607 D609 D611 D612 D613 D614 D615 D616 D617 D618 D619 D620 D621 D622 D701 D801 D802 D803 D804 D805 D806	D-8	IC21 IC81 IC601 IC602 IC801 Q1 Q2 Q21 Q22 Q23 Q24 Q26 Q27 Q28 Q81 Q82 Q83 Q84 Q601 Q701 Q801 Q802 Q803	D-6 B-4 I-8 I-6 C-15 C-4 C-7 C-7 C-5 E-7 C-8 B-5 C-5 B-3 B-2 I-6 D-15 B-14 B-13 A-12



- -: parts extracted from the component side.
- : parts mounted on the conductor side.

EA:Saudi Arabia

AUS: Australian JE : Tourist



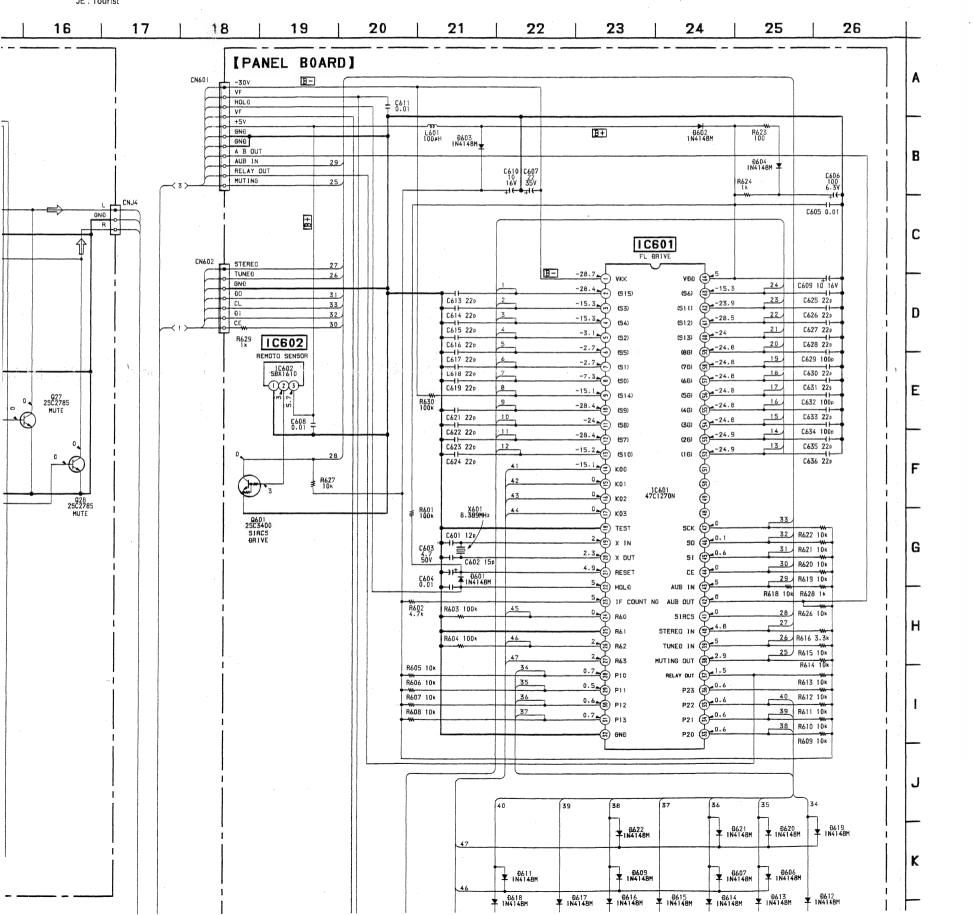
B + : B + Line B - : B - Line • All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics : adjustment for repair. All resistors are in Ω and $\frac{1}{4}W$ or less unless otherwise no mark: FM specified.): AM Voltages are taken with a VOM (Input Impedance 10M Ω). △ : internal component. : nonflammable resistor. 3-3. SCHEMATIC DIAGRAMS Voltage variations may be noted due to normal produc-EA:Saudi Arabia tion tolerances. Note: The components identified by mark \bigwedge or dotted line with mark \bigwedge are critical for safety. Replace only with part number specified. AUS: Australian ⇒ : FM JE : Tourist 17 14 12 15 16 [TUNER BOARD] RV24
STEREO INDICATION
LIGHTING LEVEL RV22 SIGNAL LEVEL METER LIGHTING LEVEL RV22 22k 750V ANT GND GND GND GND HB I C39 B+ 13 ANTENNA 754 В R44 ≱ C45 2.2k ₹ 3.3 R39 2.2× LPF21 ₽1**/** R43 R42 220k100k LPF22 2.8 022 25C2785 AF AMP 021 2502785 AF AMP - C49 R41 FR46 - 0.0022 5.64 ₹5.6k 6 6 027 2502785 MUTE C31 0.47 50V T D22 GMA01 124 GMA01 R31 ≱ C30 + D23 GMA01 B+ 0.022 0.022 11 C64 0.022 R62 47k ≯ R21 FM STEREO SEPARATION R47 220 3.8 25C3402 MUTING 028 2502785 C52 0.33 R49 50V TH 100k 0.022 T T 0.022 R1110 12.5 T0.01 **B**+ R101 ₹3.3k R106 ≱ R107 024 2503402 VCO SW -R108 12.7 25K246GR3 LPF IC81 **♠** R92 H+ C87 L C88 ±

I OM Ω). produc-

EA:Saudi Arabia

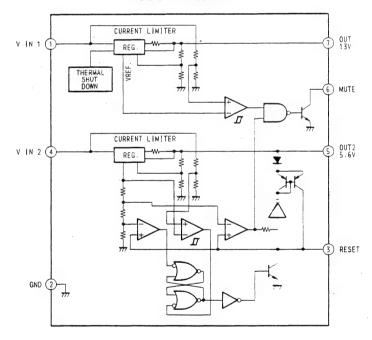
AUS: Australian

JE : Tourist

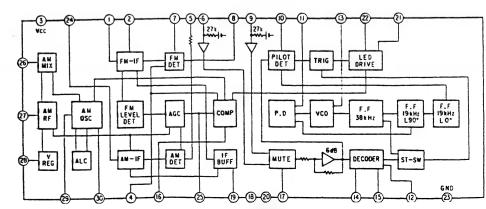


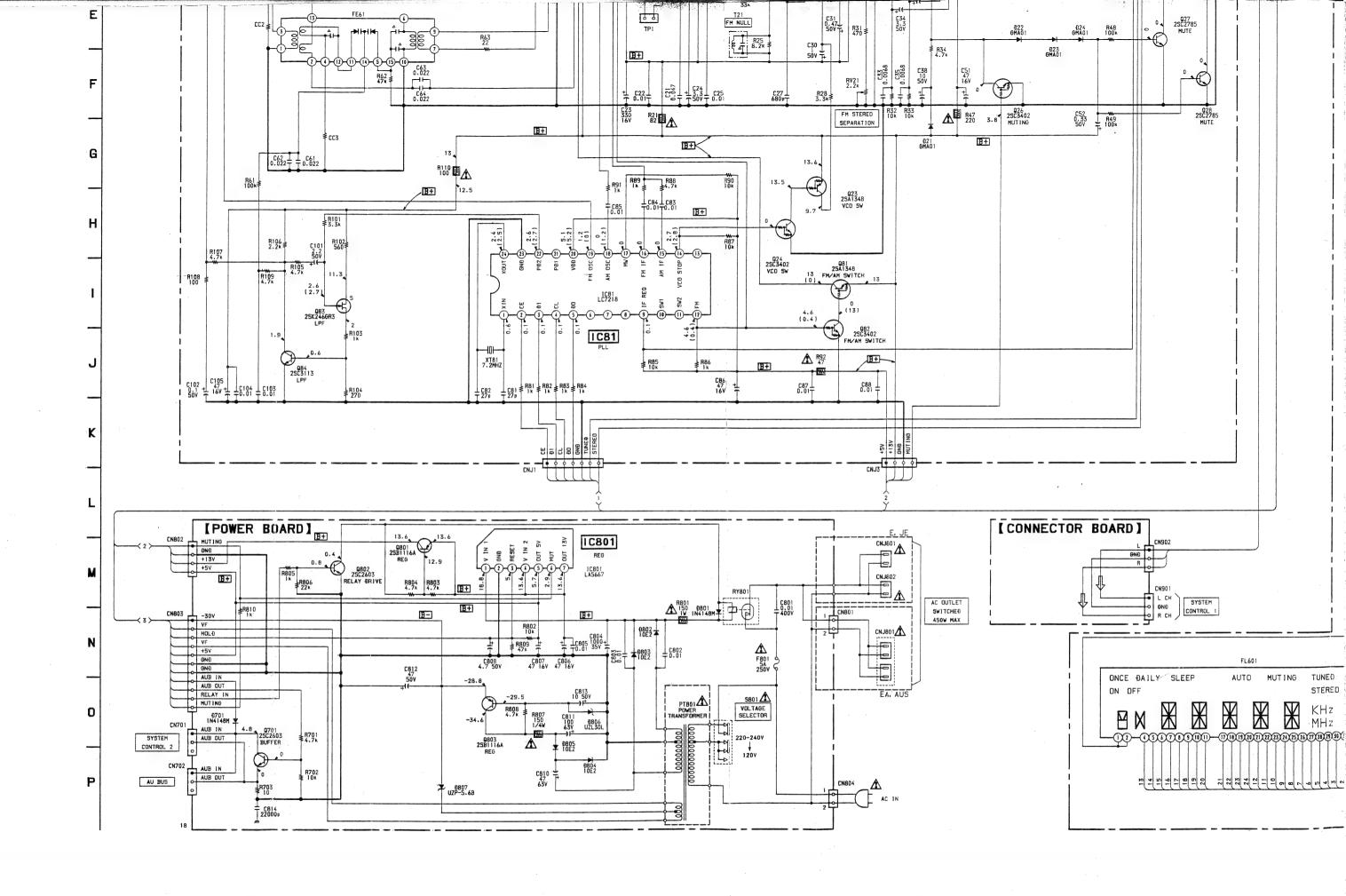
• IC Block Diagrams

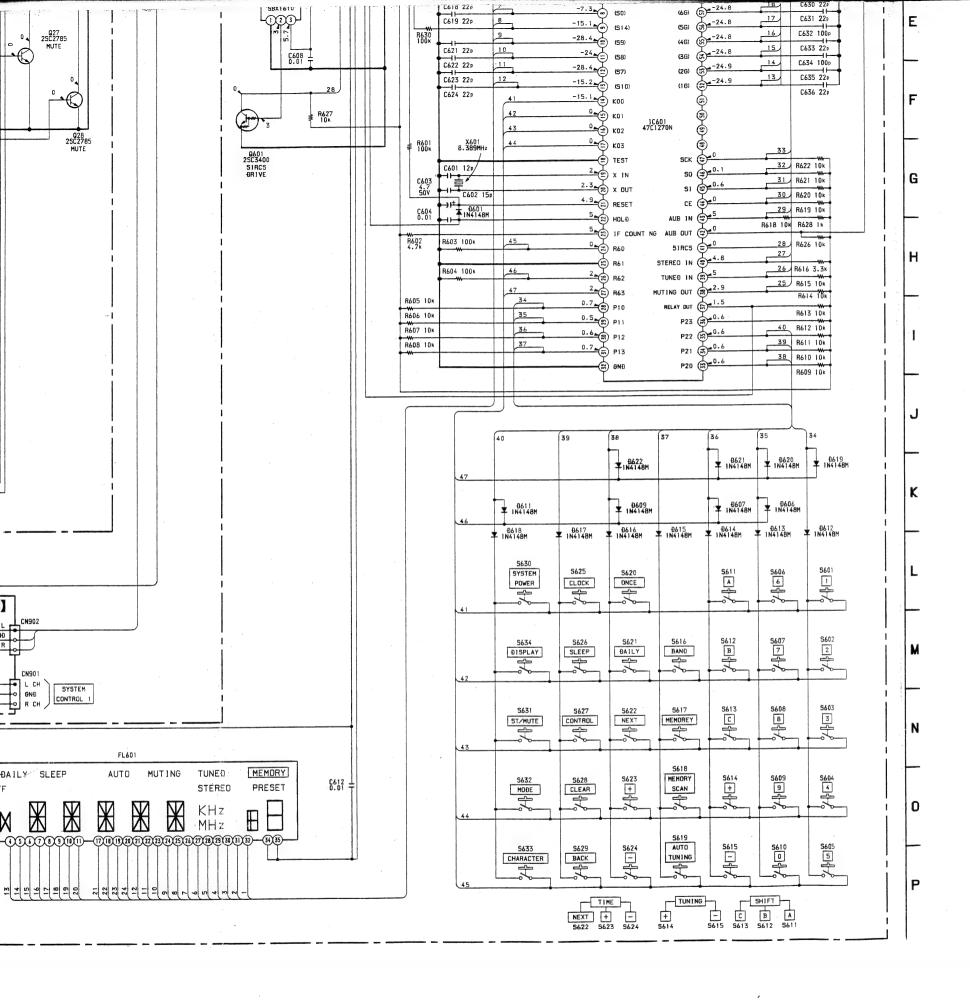
IC801 LA5667

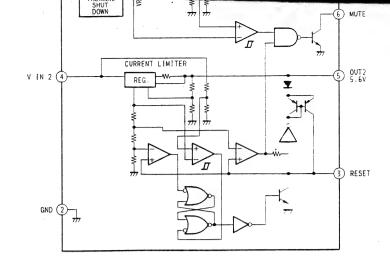


IC21 LA1851N

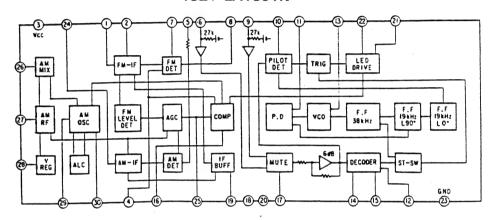




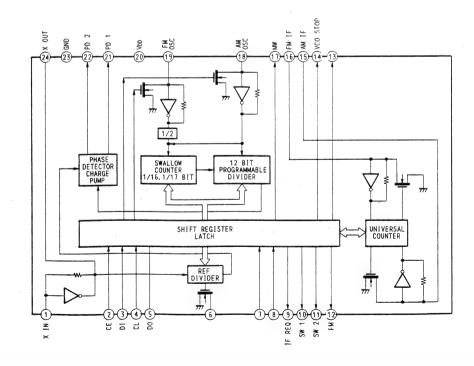




IC21 LA1851N



IC81 LC7218



SECTION 4 EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts Example:

KNOB, BALANCE(WHITE)...(RED)

Parts color Cabinet's color

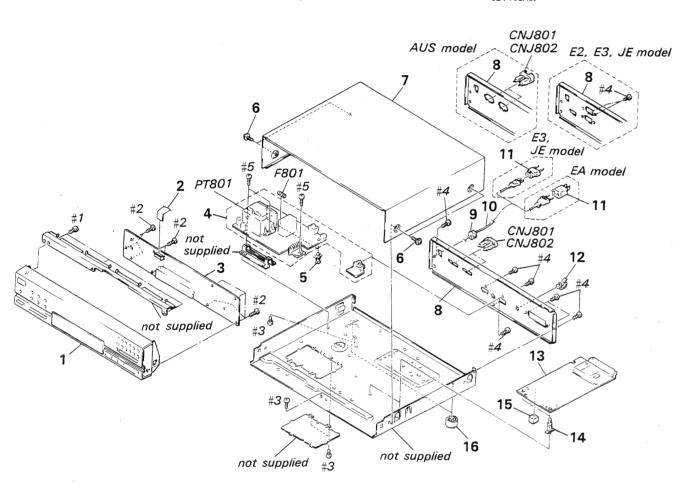
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- hardware (#mark) list is given in the last of this parts list.

The components identified by mark \bigwedge or dotted line with mark \bigwedge are critical for safety. Replace only with part number specified.

EA:Saudi Arabia

AUS: Australian

JE : Tourist



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4942-443-1	PANEL ASSY (50), FRONT (FOR I	LBT-A50)	<u>10</u>	1-575-653-11	CORD, POWER (E2, E3, JE)	
1		PANEL ASSY (607), FRONT (FOR		<u> 1</u> 0	1-590-083-11	CORD. POWER (AUS)	
1		PANEL ASSY (70). FRONT (FOR I		11	1-569-007-11	ADAPTER, CONVERSION 2P (E3. JE)	
2		WIRE, FLAT TYPE (11 CORE)		11	1-569-008-11	ADAPTER, CONVERSION 2P (EA)	
* 3		PANEL BOARD, COMPLETE		* 12	4-949-235-01	HOOK	
* 4	A-4347-279-A	POWER BOARD, COMPLETE (E2, E3,	JE)	* 13	A-4347-287-A	TUNER (2QJ) BOARD, COMPLETE	
* 4		POWER BOARD, COMPLETE (EA. AUS		* 14	4-924-098-31	HOLDER. PC BOARD	
* 5	3-349-025-31	HOLDER, PC BOARD		15	9-911-849-XX	CUSHION	
6		SCREW (CASE +3X8 TP2)		16	4-931-169-01	FOOT	
* 7	4-939-802-31	CASE		<u> </u>	1-532-299-00	FUSE, TIME-LAG (5A 250V)	-
* 8	4-950-668-51	PANEL, BACK (E2, E3, JE)		<u></u> CNJ801	1-526-794-11	OUTLET, AC (EA)	
* 8		PANEL. BACK (EA)		1 € CNJ801	1-540-196-11	OUTLET, AC (AUS)	
* 8	4-950-668-71	PANEL, BACK (AUS)		<u></u> € CNJ802	1-526-794-11	OUTLET, AC (EA)	
* 9		BUSHING (2104), CORD (EA, AUS)) .	№ CNJ802	1-540-196-11	OUTLET, AC (AUS)	
* 9	3-703-571-11	BUSHING (S) (4516), CORD (E2.	E3, JE)	<u>↑</u> PT801	1-449-978-11	TRANSFORMER, POWER	
<u>^</u> 10	1-575-651-11	CORD, POWER (EA)					

SECTION 5 ELECTRICAL PARTS LIST

PANEL POWER CONNECTOR

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- RESISTORS
 All resistors are in ohms
 METAL:Metal-film resistor
 METAL OXIDE:Metal Oxide-film resistor
 Frooflammable
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
 In each case, u:μ, for example:
 uA...: μA..., uPA...; μPA...,
 uPB...: μPB..., uPC...: μPC...,
 uPD...: μPD...
- CAPACITORS uF: μF
- COILS uH: µH

When indication parts by reference number, please include the board name.

The components identified by mark A or dotted line with mark A are critical for safety.
Replace only with part number specified.

EA:Saudi Arabia

AUS: Australian

JE : Tourist

Ref. No.	Part No.	Description			Remark 	Ref. No.	Part No.	Description			Remark
*		PANEL BOARD, CO	MPLETE			C622	1-162-207-31		22PF	5%	50V
		*******				C623	1-162-207-31	CERAMIC	22PF	5%	50 V
						C624	1-162-207-31	CERAMIC	22PF	5%	50V
*	A-4347-279-A	POWER BOARD, CO	MPLETE (E	E, JE)		C625	1-162-207-31	CERAMIC	22PF	5%	50 V
*	A-4347-285-A	POWER BOARD, CC	MPLETE (E	A. AUS)		C626	1-162-207-31	CERAMIC	22PF	5%	50 V
		******	******	*****							
						C627	1-162-207-31	CERAMIC	22PF	5%	50V
		CONNECTOR BOARD				C628	1-162-207-31	CERAMIC	22PF	5%	50V
		*********				C629	1-162-282-31	CERAMIC	100PF	10%	50V
						C630	1-162-207-31	CERAMIC	22PF	5%	50 V
*	4-921-941-01	CUSHION (FL)				C631	1-162-207-31	CERÁMIC	22PF	5%	50V
*	4-923-103-01	HOLDER, FL TUBE									
						C632	1-162-282-31	CERAMIC	100PF	10%	50V
		< CAPACITOR >				C633	1-162-207-31	CERAMIC	22PF	5%	50 V
						C634	1-162-282-31	CERAMIC	100PF	10%	50V
C601	1-162-201-31	CERAMIC	12PF	5%	50V	C635	1-162-207-31		22PF	5%	50 V
C602	1-162-203-31	CERAMIC	15PF	5%	50 V	C636	1-162-207-31	CERAMIC	22PF	5%	50V
C603	1-126-163-11	ELECT	4. 7uF	20%	50V						
C604	1-164-096-11	CERAMIC	0.01uF		50V	C801	1-161-744-00	CERAMIC	0.01uF		400\
C605	1-161-379-00	CERAMIC	0.01uF	20%	25V	C802	1-101-004-00	CERAMIC	0.01uF		50V
						C803	1-101-004-00		0.01uF		50 V
C606	1-126-177-11	ELECT	100uF	20%	10V	C804	1-126-105-11		1000uF	20%	35V
C607	1-124-916-11	ELECT	22uF	20%	63V	C805	1-164-096-11	CERAMIC	0.01uF		50V
C608	1-164-096-11	CERAMIC	0.01uF		50 V						
C609	1-126-157-11	ELECT	10uF	20%	16V	C806	1-126-022-11		47uF	20%	16V
C610	1-126-157-11	ELECT	10uF	20%	16V	C807	1-126-022-11		47uF	20%	16V
						C808	1-126-163-11		4. 7uF	20%	50V
C611	1-164-096-11		0.01uF		50 V	C810	1-124-918-11		. 47uF	20%	63V
C612	1-164-096-11		0.01uF		50V	C811	1-124-572-11	ELECT	100uF	20%	63V
C613	1-162-207-31		22PF	5%	50 V						
C614	1-162-207-31		22PF	5%	50 V	C812	1-124-910-11		47uF	20%	50V
C615	1-162-207-31	CERAMIC	22PF	5%	50 V	C813	1-126-059-11		10uF	20%	50V
						C814	1-161-494-00	CERAMIC	0. 022uF		25V
C616	1-162-207-31		22PF	5%	50 V						
C617	1-162-207-31		22PF	5%	50V			< CONNECTOR >			
C618	1-162-207-31		22PF	5%	50V		4 500 054 44	DARKET DANNE	ATAR 448		
C619	1-162-207-31		22PF	5%	50 V			SOCKET. CONNE			
C621	1-162-207-31	CERAMIC	22PF	5%	50V			SOCKET. CONNE			
						* CN/01	1-156-625-11	SOCKET, CONNE	CIOK 3P		

The compone mark \(\frac{1}{N} \) or do \(\frac{1}{N} \) are critical Replace only specified.

Ref. No. Part N

CN801 1-535-

* CN802 1-568-

* CN803 1-568-

* CN804 1-564-

* CN901 1-569-

CN902 1-568-

↑ CNJ801 1-540-

D601 8-719-

D602 8-719-D603 8-719-

D604 8-719-

D606 8-719-

D607 8-719-D609 8-719-

D611 8-719-

D612 8-719-D613 8-719-

D614 8-719-D615 8-719-D616 8-719-

D617 8-719-D618 8-719-

D619 8-719-D620 8-719-

D621 8-719-D622 8-719-D701 8-719-

D801 8-719-

D802 8-719-D803 8-719-

D804 8-719-1 D805 8-719-1

D806 8-719-1 D807 8-719-1

<u>↑</u> F801 1-532-

* FH801 1-533-* FH802 1-533-

PANEL	POWER	CONNECTOR
1 / 1/4 /	1 0 11 -11	00

Remark

y reference	,	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description -		Rema
he board i	name.	CN801	1-535-139-00	BASE POST 22MM (10MM PITCH)				< FLUORESCEN	T. INDICATOR >	
ntified b	· 1	* CN802	1-568-308-11	SOCKET. CONNECTOR 4P		51.001	1 510 700 11	INDICATOR TIL	BE, FLUORESCENT	r - ·
with mar y.	k			SOCKET, CONNECTOR 11P		1601	1-519-728-11	INDICATOR TO	oc, fedomesoch	,
y. rt numbe	er	* CN804	1-564-321-00	PIN, CONNECTOR 2P				< 1C >		
		* CN901	1-569-625-41	SOCKET, CONNECTOR 3P				(10)		
		CN902	1-568-269-11	SOCKET. CONNECTOR 3P			8-759-053-98 8-741-100-48		270AN-H204 -59	
				< OUTLET >		10801	8-759-820-09	IC LASS67		
		<u> </u>	1-540-040-11	OUTLET. AC (NONPOLAR) (2P)	(E. JE)			< TRANSFORME	R >	
				< DIODE >		<u></u> ₱₹801	1-449-978-11	TRANSFORMER.	POWER	
	Remark	D601	8-719-987-63	DIODE 1N4148M				< TRANSISTOR	>	
		D602	8-719-987-63							
5%	50V	D603	8-719-987-63	DIODE 1N4148M		Q601	8-729-900-36		DTC124ES	
5 %	50V	D604	8-719-987-63	DIODE 1N4148M	!	0701	8-729-620-05		2SC2603-EF	
5% 5%	50V	D606	8-719-987-63	DIODE 1N4148M		0801	8-729-140-04	TRANSISTOR	2SB1116A-L	
5 %	50V	-	•			0802	8-729-620-05		2SC2603-EF	
5%	50V	D607	8-719-987-63	DIODE 1N4148M	•	0803	8-729-140-04	TRANSISTOR	2SB1116A-L	
576	001	D609	8-719-987-63	DIODE 1N4148M						
5%	50V	D611	8-719-987-63	DIODE 1N4148M				< RESISTOR >		
5%	50V	D612	8-719-987-63				*		524	4 / 4111
10%	50V	D613	8-719-987-63	DIODE 1N4148M		R601	1-249-441-11		100K 5%	1/4W
5%	50V					R602	1-249-429-11		10K 5%	1/4W
5%	50V	D614	8-719-987-63	DIODE 1N4148M		R603	1-249-441-11		100K 5%	1/4W
070	***	D615	8-719-987-63	DIODE 1N4148M		R604	1-249-441-11		100K 5%	1/4W
10%	50 V	D616	8-719-987-63			R605	1-249-429-11	CARBON	10K 5%	1/4W
5%	50V	D617	8-719-987-63	DIODE 1N4148M						4.4400
10%	50V	D618	8-719-987-63	DIODE 1N4148M		R606	1-249-429-11		10K 5%	1/4W
5%	50V					R607	1-249-429-11		10K 5%	1/4W
5%	50 V	D619	8-719-987-63	B DIODE 1N4148M		R608	1-249-429-11		10K 5%	1/4W
070	•••	D620	8-719-987-63			R609	1-249-429-1		10K 5%	1/4W
	400V	D621	8-719-987-63			R610	1-249-429-1	CARBON	10K 5%	1/4W
	50V	D622	8-719-987-6	B DIODE 1N4148M						
:	50V	D701	8-719-987-6			R611	1-249-429-1		10K 5%	1/4W
20%	35V					R612	1-249-429-1		10K 5%	1/4W
:	50V	D801	8-719-987-6	B DIODE 1N4148M		R613	1-249-425-1		4. 7K 5%	1/4W
	•••	D802	8-719-200-7				1-249-429-1		10K 5%	1/4W
20%	16V	D803	8-719-200-7			R615	1-249-429-1	1 CARBON	10K 5%	1/4W
20%	16V	D804	8-719-200-7	7 DIODE 10E2N					0.04 50	1 / 414
20%	50V	D805	8-719-200-7			R616	1-249-423-1		3. 3K 5%	1/4W
20%	63V					R618	1-249-417-1		1 K 5%	1/4W
20%	63V	D806	8-719-934-2	2 DIODE HZS30-2L		R619	1-249-429-1		10K 5%	1/4W
	•	D807	8-719-014-6			R620	1-249-429-1		10K 5%	1/4W
20%	50V					R621	1-249-429-1	1 CARBON	10K 5%	1/4W
20%	50V			< FUSE >					100 50	4 / 400
F	25V					R622	1-249-429-1		10K 5%	1/4W
-		<u></u> ₹801	1-532-299-0	O FUSE. TIME-LAG (5A 250V)		R623	1-249-405-1		100 5%	1/4W
		<u></u>				R624	1-249-417-1		1K 5%	1/4W
				< FUSE HOLDER >		R625	1-249-441-1		100K 5%	1/4W
						R626	1-249-429-1	1 CARBON	10K 5%	1/4W
		* FH801	1-533-213-3	1 HOLDER, FUSE						
				1 HOLDER, FUSE		R627	1-249-429-1		10K 5%	1/4W
		4 1110VZ				R628	1-249-417-1		1K 5%	1/4W
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				R629	1-249-417-1		1K 5%	1/4W
		mark ∕•\ ar	components or dotted re critical for since only with	line with mark afety.		R630	1-249-441-1	1 CARBON	100K 5%	1/4W

PANEL POWER CONNECTOR TUNER

Ref. No.	Part No.	Description			,	emark	Ref. No.	Part No.	Description			Remark
R631	1-249-385-11	CARBON	2. 2	5%	1/4W		\$631		SWITCH, TACTIL			
R701	1-249-425-11		4. 7K		1/4W		\$632	1-554-303-21	SWITCH, TACTIL	E (MODE)		
	1-249-429-11		10K	5%	1/4W		\$633	1-554-303-21	SWITCH, TACTIL	E (CHARACTER	?)	
R702	1-249-393-11		10	5%	1/4W		\$634	1-554-303-21	SWITCH. TACTIL	E (DISPLAY)		
<u>↑</u> R801	1-215-864-00		150	5%	1 W	F	<u>↑</u> \$801	1-571-722-11	SWITCH. VOLTAG	E SELECTION		
R802	1-249-429-11	CARBON	10K	5%	1/4W				< CRYSTAL >			
R803	1-249-425-11		4. 7K	5%	1/4W							
R804	1-249-425-11		4.7K		1/4W		X601	1-579-564-11	VIBRATOR, CRYS	TAL (8. 389M)	łz)	
R805	1-249-417-11		1 K	5%	1/4W		******	******	******	********	*****	*****
R806	1-249-433-11		22K	5%	1/4W							
11000	1 240 400 11	371113411					*	A-4347-287-A	TUNER BOARD. C	OMPLETE		
<u></u> R807	1-247-702-11	CARBON	150	5%	1/4W	F			******	*****		
R808	1-249-425-11		4. 7K	5%	1/4W							
R809	1-249-437-11		47K	5%	1/4W			1-630-140-14	TUNER BOARD			
R810	1-249-417-11		1 K	5%	1/4W		*	4-924-988-11	PLATE (ST), GR	OUND		
		< RELAY >							< CAPACITOR >			
04001	1-515-617-11	DELAV					C1	1-162-294-31	CERAMIC	0.001uF	2.0%	2 5 V
KYBUI	1-313-011-11	NELAT					C2	1-124-477-11		47uF	20%	25V
		< SWITCH >					C3		CERAMIC CHIP	0.01uF	20%	16V
		< SMITCH >					C4	1-162-294-31		0.001uF	20%	25V
0001	1 554 202 21	SWITCH, TACTIL	F (1)				C5		CERAMIC CHIP	0.01uF	20%	16V
\$601		SWITCH, TACTIL										
S602		SWITCH, TACTIL					C6	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V
\$603		SWITCH, TACTIL					C 9°		CERAMIC CHIP	0.01uF	20%	16V
\$604		SWITCH, TACTIL					C21	1-101-006-00	CERAMIC	0.047uF		50V
\$605	1-354-303-21	SWITCH, INCITE	L (0)				C22	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V
0000	1 554-202-21	SWITCH, TACTIL	F (6)				C23	1-124-119-00	ELECT	330 u F	20%	16V
S606 S607		SWITCH. TACTIL										
\$608		SWITCH. TACTIL					C24	1-123-382-00	ELECT	3. 3uF	20%	100V
\$609		SWITCH, TACTIL					C25	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V
S610		SWITCH, TACTIL					C26		CERAMIC CHIP	0.0068uF	20%	12V
3010	1-334-303-21	owiton, thorte	L (0)				C27	1-162-516-11	CERAMIC CHIP	100PF	10%	50 V
\$611	1_554_203_21	I SWITCH, TACTIL	F (SHI	FT A)			C28	1-124-903-11		1uF	20%	50V
\$612		SWITCH, TACTIL										
S613	1-554-303-21	SWITCH, TACTIL	F (SHI	FT C)			C30	1-124-903-11	ELECT	1uF	20%	50V
S614		SWITCH, TACTIL					C31	1-124-902-00	ELECT	0. 47uF	20%	50V
\$615	1-554-303-2	1 SWITCH, TACTIL	F (TUN	ING -	.)		C32	1-124-463-00	ELECT	0. 1uF	20%	50 V
3013	1 004 000 2	, 0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					C33	1-130-481-00) MYLAR	0.0068uF	5%	50 V
\$616	1-554-303-2	1 SWITCH, TACTIL	E (BAN	D)			C34	1-123-382-00	ELECT	3. 3uF	20%	100V
\$617	1-554-303-2	1 SWITCH, TACTIL	E (MEM	ORY)								
\$618	1-554-303-2	1 SWITCH, TACTIL	E (MEN	ORY S	CAN)		C35	1-130-481-00	MYLAR	0.0068uF	5%	50V
\$619	1-554-303-2	1 SWITCH, TACTIL	E (AUT	O TUN	IING)		C36	1-123-382-00	ELECT	3. 3uF	20%	100V
\$620		1 SWITCH, TACTIL					C37	1-124-907-1	1 ELECT	10uF	20%	50 V
3020	1 334 333 2						C38	1-124-907-1	1 ELECT	10uF	20%	50V
\$621	1-554-303-2	1 SWITCH, TACTIL	F (DAI	LY)			C39	1-163-059-0	CERAMIC CHIP	0.01uF	20%	16V
\$622	1-554-203-2	1 SWITCH, TACTIL	E (TIM	E NE)	(T)							
S623		1 SWITCH. TACTIL			•		C40	1-124-463-0	O ELECT	0. 1uF	20%	50 V
3624	1-554-300-2	1 SWITCH. TACTIL	F (TIM	IE -)			C41	1-124-927-1		4. 7uF	20%	100V
3024 S625	1-554-303-2	1 SWITCH, TACTIL	E (C10	CK)			C42		O CERAMIC - CHIP	0.01uF	20%	16V
2072	1-334-303-2	I SHILDIN LAGILI	\	J.,			C43	1-126-176-1		220uF	20%	10V
cene	1_554 000 0	1 SWITCH, TACTII	F (91 F	FP)			C44		O CERAMIC CHIP	0.01uF	20%	16V
S626		1 SWITCH. TACTII			1							
\$627	1-554-303-2	1 SWITCH. TACTII	ב (כטו	TUOL)	'		C45	1-123-382-0	O ELECT	3. 3uF	20%	100V
S628							C46	1-162-524-1		0. 0022uF		25V
\$629	1-554-303-2	1 SWITCH, TACTII 1 SWITCH, TACTI	E (GA)	TEM I	DUME D)		C48	1-123-382-0		3. 3uF	20%	100V
S630	1-554-303-2	I SWITCH, TACILI	TE (91)) I L M	OHEN)		. 040	1 120 002 0		 ·		

The components identified by or dotted line with mark ere critical for safety.

TUNER

	Part No.	Description			Remark	Ref. No.	Part No.	Description				emark
C49	1-162-524-11	CERAMIC	0. 0022uF	20%	25V			< COIL >				
C51	1-124-477-11		47uF	20%	25V							
C52	1-124-252-00		0. 33uF	20%	50V	L1	1-410-645-31	INDUCTOR	100uH			
C61		CERAMIC CHIP	0. 022uF		25V	L21	1-410-171-11	INDUCTOR	1mmH			
C62		CERAMIC CHIP	0. 022uF		25V							
002								< FILTER >				
C63	1-163-063-00	CERAMIC CHIP	0. 022uF		25V							
C64		CERAMIC CHIP	0. 022uF		25V		1-235-164-00					
C81	1-102-961-00		27PF	5%	50 V	LPF22	1-235-164-00	FILTER, LOW	PASS			
C82	1-102-961-00		27PF	5%	50V							
C83	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V			< TRANSISTOR	>			
C84	1-163-059-00	CERAMIC CHIP	0. 01uF	20%	16V	Q1	8-729-230-XX	TRANSISTOR	2SC2669-0	Υ		
C85		CERAMIC CHIP	0.01uF	20%	16V	Q2	8-729-230-XX	TRANSISTOR	2SC2669-0	PΥ		
C86	1-124-477-11	ELECT	47uF	20%	25V	Q21	8-729-119-78	TRANSISTOR	2SC2785-1	HFE		
C87		CERAMIC CHIP	0. 01uF	20%	16V	022	8-729-119-78	TRANSISTOR	2SC2785-	1FE		
C88		CERAMIC CHIP	0. 01uF	20%	16V	023	8-729-900-61	TRANSISTOR	DTA114ES			
C101	1-124-925-11	FIFCT	2. 2uF	20%	100V	024	8-729-900-80	TRANSISTOR	DTC114ES			
C102	1-124-463-00		0. 1uF	20%	50V	026	8-729-900-80	TRANSISTOR	DTC114ES			
C103		CERAMIC CHIP	0. 01uF	20%	16V	027	8-729-119-78	TRANSISTOR	2SC2785-1	IFE		
C104		CERAMIC CHIP	0. 01uF	20%	16V	028	8-729-119-78	TRANSISTOR	2SC2785-1	1FE		
C105	1-124-477-11		47uF	20%	25V	Q81	8-729-900-61	TRANSISTOR	DTA114ES			
						202	a 700 000 00	TOANCICTOR	DTC114ES			
		< CARBON MELF >				082	8-729-900-80		2SK246-GF	2		
					4 (511)	083	8-729-202-67					
CC2	1-249-366-11		0	5%	1/5W	Q84	8-729-230-93	IKANSISIUK	2SC3113-#	40		
CC3	1-249-366-11	CARBON MELF	0	5%	1/5₩			< RESISTOR >				
		< CERAMIC FILTE	R >									
		C CENTING TO THE	••			<u></u> ₹ R1	1-249-401-11	CARBON	47	5%	1/4W	F
CF1	1-567-389-11	FILTER. CERAMIC				R3	1-249-329-11	CARBON MELF	. 330	5%	1/8W	
CF2		FILTER, CERAMIC				R4	1-249-329-11	CARBON MELF	330	5%	1/8W	
CF21		OSCILLATOR, CER				R5	1-249-329-11	CARBON MELF	330	5%	1/8W	
		TRANSFORMER, IF (LTER)		R6	1-249-350-11	CARBON MELF	18K	5%	1/8W	
V	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				!							
		< CONNECTOR >				R7	1-249-329-11		330	5%	1/8W	
					:	R8	1-249-332-11		560	5%	1/8W	
* CNJ1	1-568-273-11	SOCKET. CONNECT	OR 7P			Rg	1-249-352-11		27K	5%	1/8W	_
		SOCKET, CONNECT				<u></u> A R21	1-249-404-00		. 82	5%	1/4W	F
CNJ4	1-568-269-11	SOCKET, CONNECT	OR 3P			R22	1-249-430-11	CARBON	12K	5%	1/4W	
		< DIODE >	*			- R23	1-249-335-11	CARBON MELF	1 K	5%	1/8W	
						R24	1-249-353-11		33K	5%	1/8W	•
D2 1	8-719-987-63	DIODE 1N4148M				R25	1-249-346-11	CARBON MELF	8. 2K	5%	1/8W	
D22	8-719-987-63					R27	1-249-432-11	CARBON	18K	5%	1/4W	
D23	8-719-987-63					R28	1-249-423-11	CARBON	3. 3K	5%	1/4W	
D24	8-719-987-63											
•						R29	1-249-347-11		10K	5%	1/8W	
		< FRONT END >				R31	1-249-331-11		470	5%	1/8W	
						R32	1-249-347-11		10K	5%	1/8W	
FE1	1-463-862-21	FRONT END, FM				R33	1-249-347-11		10K	5%	1/8W	
FE61		ENCAPSULATED CO	MPONENT			R34	1-249-425-11	CARBON	4. 7K	5%	1/4W	
		< 10 >				R35	1-249-355-11	CARBON MELF	47K	5%	1/8W	
		- 10 /				R37	1-249-359-11		100K	5%	1/8W	
1001	8-759-821-45	IC LA1851N				R38	1-249-363-11		220K		1/8W	
1021 1081	8-759-820-91					R39	1-249-339-11		2. 2K		1/8W	
1001	0-143-070-31	'A FAIT (A										

The components identified by mark A or dotted line with mark A are critical for safety.
Replace only with part number specified.

TUNER

Ref. No.	Part No.	Description			R	emark	Ref. No.	Part No.	Description	Remark
R40	1-249-338-11	CARBON MELF	1. 8K	5%	1/8W				< TEST POINT >	
R41	1-249-344-11		5. 6K	5%	1/8W					
R42	1-249-359-11		100K	5%	1/8W		* TP1	1-560-060-00	PIN, CONNECTOR 2P	
R43	1-249-363-11		220K	5%	1/8₩					
R44	1-249-339-11		2. 2K	5%	1/8 W				< CRYSTAL >	
R45	1-249-338-11	CARBON MELF	1. 8K	5%	1/8W		XT81	1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)	
R46	1-249-344-11		5. 6K	5%	1/8W					
№ R47	1-249-409-11		220	5%	1/4W	F	******	******	**********	******
R48	1-249-359-11		100K	5%	1/8W					
R49	1-249-359-11		100K	5%	1/8W				MISCELLANEOUS	
R61	1-249-359-11	CARBON MELF	100K	5%	1/8W				*******	
R62	1-249-355-11		47K	5%	1/8W		2	1-575-666-11	WIRE, FLAT TYPE (11 CORE)	
R63	1-249-315-11		22	5%	1/8W		<u></u> 10	1-575-651-11	CORD. POWER (EA)	
R81	1-249-335-11		1 K	5%	1/8W		<u>A</u> 10	1-575-653-11	CORD, POWER (E2, E3, JE)	
R82	1-249-335-11		1 K	5%	1/8W		<u> </u>	1-590-083-11	CORD, POWER (AUS)	
1102							11	1-569-007-11	ADAPTER. CONVERSION 2P (E3.	JE)
R83	1-249-335-11		1 K	5%	1/8W			4 500 000 11	ADARTED CONVERGION OR (CA)	
R84	1-249-335-11		1 K	5%	1/8W		11		ADAPTER, CONVERSION 2P (EA)	
R85	1-249-347-11		10K	5%	1/8W				OUTLET, AC (EA)	
R86	1-249-335-11		1 K	5%	1/8W				OUTLET, AC (AUS)	
R87	1-249-347-11	CARBON MELF	10K	5%	1/8W				OUTLET, AC (EA)	
							₩ CN1805	1-540-196-11	OUTLET. AC (AUS)	
R88	1-249-343-11		4. 7K	5%	1/8W				5005 TIME 140 (54 0500)	
R89	1-249-335-11		1 K	5%	1/8W		<u>₩</u> 1801	1-532-299-00	FUSE. TIME-LAG (5A 250V)	
R90	1-249-347-11		10K	5%	1/8W					
R91	1-249-335-11		1 K	5%	1/8W	_	******	*********	**********	*********
<u> </u>	1-249-401-11	CARBON	47	5%	1/4W	F		ACCECCOBIE	S & PACKING MATERIALS	
		01000H 1151 5	0.04	E0/	1 /ow				******	
R101	1-249-341-11		3. 3K	5%	1/8W			*******	********	
R102	1-249-332-11		560	5%	1/8W			4-020-040-01	SHEET (A), PROTECTION	
R103	1-249-335-11		1K	5%	1/8W		*	4-929-563-01		
R104 R105	1-249-328-11		270 4. 7K	5% 5%	1/8W 1/8W		*	4-525-303-01	00011104	
NIVV							******	********	**********	********
R106	1-249-339-11		2. 2K	5%	1/8W					
R107	1-249-343-11		4. 7K	5%	1/8W			HAD	DWARE LIST	
R108	1-249-323-11		100	5%	1/8W			пап	DVVARE LIST	
R109	1-249-343-11	•	4. 7K		1/8W	_				
<u> </u>	1-249-405-11	CARBON	100	5%	1/4W	F		7 005 101 10	CORFU INTE A CVO TVDEA N C	
							#1		SCREW +BTP 2. 6X8 TYPE2 N-S	
		< VARIABLE RES	ISTOR >	•			#2		SCREW (PANEL 2.6 TP2)	
							#3		SCREW +BVTP 3X8 TYPE2 N-S	
RV21		RES. ADJ. CARB					#4		SCREW (BV/RING) SCREW +BVTP 3X10 TYPE2 N-S	
RV22		RES, ADJ, CARB					#5	1-085-041-19	SCHEM TRAIL SYIN TILES W-2	
RV24	1-238-017-11	RES. ADJ. CARB	ON 22K							
		< TRANSFORMER	>							
T21	1-404-807-11	TRANSFORMER, C	ISCRIMI	NATO	R					
		< TERMINAL BOA	RD >						The components ide	entified by
TM1	1-537-238-21	TERMINAL BOARD	(ANT)						mark A or dotted lin	e with mark

dentified by ne with mark A are critical for safety. Replace only with part number specified.

> English 92D1819-1 Printed in Japan ©1992.4

CDP-C325M/C422M

SERVICE MANUAL



AEP Model UK Model E Model Australian Model

Photo: CDP-C325M

Model Name Using Similar Mechanism	CDP-C225/C325
Optical Pick-up Block Type	BU-5BD8B

SPECIFICATIONS

		,				
	CDP-C325M	CDP-C422M				
System	Compact disc digital a	udio system				
Laser	Semiconductor laser $(\lambda = 780 \text{ nm})$ Emission duration: continuous					
Laser output	 Max. 44.6 μW* This output is the value measured at a distance of about 200 mm from the objective lens surfaction the Optical Pick-up Block. 					
Frequency response	2 Hz - 20 kHz (±0.5 dB)					
Signal to noise ratio	More than 100 dB					
Dynamic range	More than 98 dB					
Harmonic distortion	Less than 0.005% (1	kHz)				
Channel separation	More than 100 dB (1	kHz)				
Wow and flutter	Below measurable lim	it				
Outputs LINE OUT (phono jacks)	Output level 2 V (at 5 Load impedance over					
HEADPHONES (stereo phone jack)	Output level 0 - 10 mW (variable) (at 32 ohms)					

General

Power requirements	UK, Australian model: 240 V AC, 50/60 Hz AEP, East European model: 220—230 V AC, 50/60 Hz E model: 110 — 120 or 220 — 240 V AC adjustable, 50/60 Hz
Power consumption	12 W
Dimensions (not including projecting parts and controls)	Approx. 355 × 120 × 385 mm (w/h/d) (14 × 4¾ × 15¼ inches)
Weight	Approx. 5.0 kg (11 ibs 01 oz)

Supplied accessories

	CDP-C325M	CDP-C422M
Audio signal connecting cord	1 (phono plug × 2 ↔ p	hono plug $ imes$ 2)
Remote commander	1 (RM-D325)	
Sony SUM-3 (NS) batteries	2	

Design and specifications subject to change without notice.



For the United Kingdom and European Countries.



This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential diference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

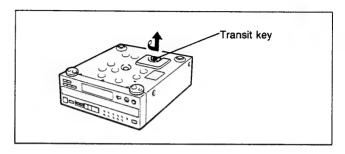
NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30cm away from the objective lens.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK A OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Note on the Transit Key



The transit key on the bottom exterior of the unit protects the optical system against shock during transportation. Before operating the CD player, be sure to remove the key by following the instructions on the label, and store it in a safe place.

When transporting the unit, replace the key in its original hole and lock it in place.

MODEL IDENTIFICATION

CDP-C325M
CDP-C422M

SONY

MODEL No.

AEP, EE model: AC: 220-230V~50/60Hz UK, AUS model: AC: 240V~50/60Hz

E model: AC: 110-120, 220-240V~50/60Hz 12W

AUS: Australian model
 EE: East European model

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

1. Laser Diode Properties

Material: GaAlAs Wavelength: 780 nm

Emission Duration: continuous

Laser Output Power: less than 44.6 µW*

This output is the value measured at a distance of 200 mm from the objective lens surface on the

Optical Pick-up Block.

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optical Pick-up Block (including APC board).

BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iøvrigt instruktionerne i servicemanualen.

ADVARSEL!!

Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.

1. Laser-didoe data

• Materiale: GaAlAs • Bølgelængde: 780 nm Udstråling: Kontinuerlig • Laseroutput: Max. 0,4 mW*

> Målt i 1.6 mm afstand fra overfladen af objektivlinsen pa den optiske pick-up enhed.

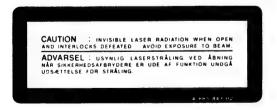
• Klassifikation: Klasse IIIb.

2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laserdjoden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

LASER ADVARSEL MÆRKNING

Følgende mærkning findes indvendig i apparatet:

1. Advarsel Mærkning

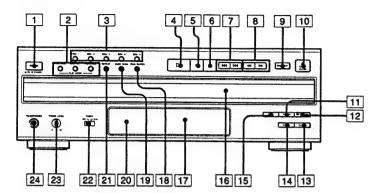


VAROITUS: Laite sisāltāā, laserdiodin, joka lāhettāā (nākymātontā) silmille vaarallista lasersateilyā.

SECTION 1 **GENERAL**

1-1. LOCATION AND CONTROLS

Front Panel



This section is extracted from instruction manual.

Refer to the pages indicated in () for details.

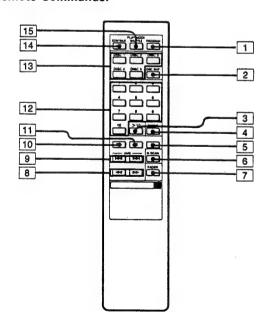
- 1 POWER switch (page 18)
- 2 PLAY MODE buttons

CONTINUE button (page 18) SHUFFLE button (page 28)

PROGRAM button (page 30)

- 3 DISC 1-5 buttons (page 18)
- ► (play) button (page 18)
- 5 II (pause) button (page 18)
- (stop) button (page 18) 6
- I◄◄/▶► (AMS*) buttons (page 24)
- ◄◄/►► (manual search) buttons (page 26) 8
- DISC SKIP button (page 18)
- 11 FADER button (page 44)
- EDIT/TIME FADE button (page 36) 12
- 13 CLEAR (program clear) button (page 34)
- CHECK (program check) button (page 34)
- 15 TIME button (page 22)
- 16 Disc tray (page 18)
- 17 Display window
- 18 PEAK SEARCH button (page 48)
- 19 MUSIC SCAN button (page 42)
- Remote sensor (CDP-C325M only)
- 21 REPEAT button (page 42)
- 22 TIMER switch (CDP-C325M only) (page 50)
- PHONE LEVEL control (CDP-C325M only) (page 18)
- 24 HEADPHONES jack (CDP-C325M only)
- * AMS is the abbreviation of Automatic Music Sensor.

Remote Commander



Refer to the pages indicated in () for details.

CDP-C325M only

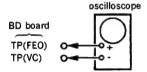
- 1 PROGRAM button (page 30)
- DISC SKIP button (page 18)
- >10 (over 10) button (page 24)
- REPEAT button (page 42)
- (stop) button (page 18)
- MUSIC SCAN button (page 42) 6 7
- FADER button (page 44)
- ◄ ►► (manual search) buttons (page 26)
- I← ►► (AMS) buttons (page 24)
- ► (play) button (page 18)
- II (pause) button (page 18)
- 11 Numeric buttons (1-10) (page 24)
- DISC 1-5 buttons (page 18)
- CONTINUE button (page 18)
- SHUFFLE button (page 28)

SECTION 2 ELECTRICAL BLOCK CHECKING

Note:

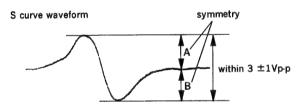
- CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
- Use YEDS-18 disc (3-702-101-01) unless otherwise indicated
- 3. Use the oscilloscope with more than $10M\Omega$ impedance.
- Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



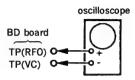
Procedure:

- Connect oscilloscope to test point TP (FEO) on BD board.
- Connect between test point TP (FES) and TP (VC) by lead wire.
- Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
- 4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within $3\pm1\mathrm{Vp}$ -p.



- 5. After check, remove the lead wire connected in step 2.
- Note: Try to mesure several times to make sure that the ratio of A: B or B: A is more than 10: 7.
 - Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

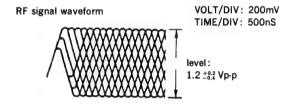


Procedure:

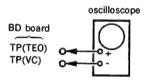
- Connect oscilloscope to test point TP (RFO) on BD board.
- 2. Turn Power switch on.
- 3. Put disc (YEDS-18) in and playback.
- Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note:

Clear RF signal waveform means that the shape "\$\infty" can be clearly distinguished at the center of the waveform.

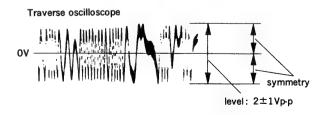


E-F Balance Check



Procedure:

- Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
- 2. Connect oscilloscope to test point TP (TEO) on BD board.
- 3. Turn Power switch on.
- 4. Put disc (YEDS-18) in and playback.
- 5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

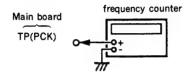


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure:

1. Connect frequency counter to test point (PCK) with lead wire.



- 2. Turn Power switch on.
- 3. Confirm that reading on frequency counter is 4.3218MHz.

Focus/Tracking Gain

This gain has a margin, so even if it is slightly off.

There is no problem.

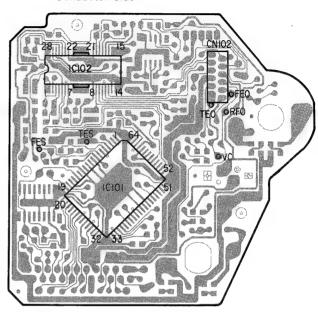
Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

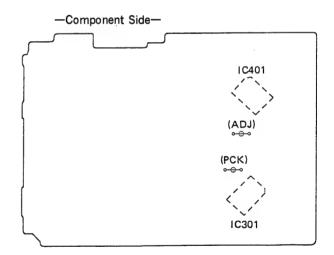
Adjustment Locations:

[BD Board]

-Conductor Side-

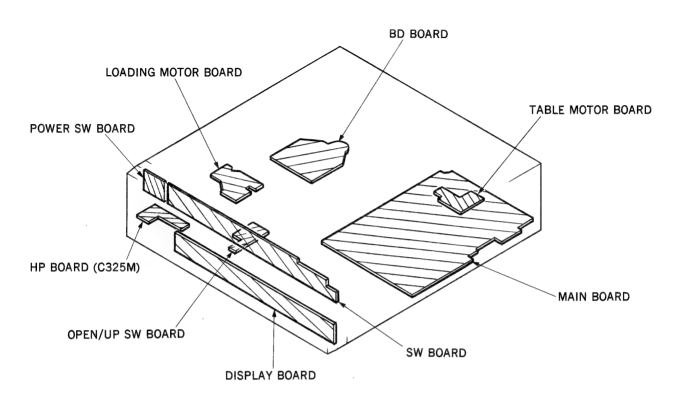


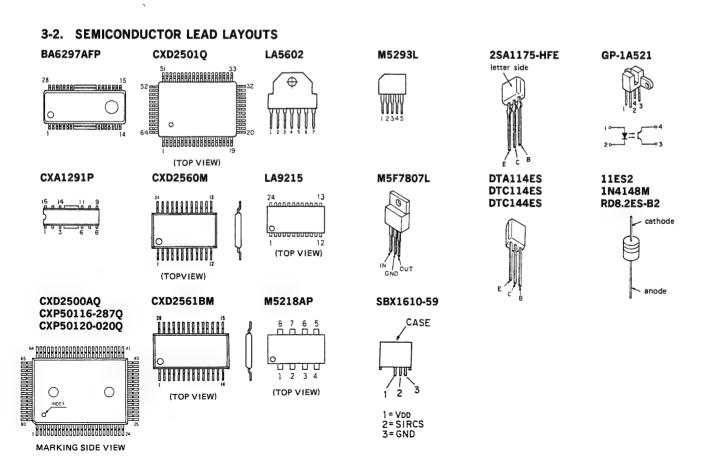
[MAIN Board]



SECTION 3 DIAGRAMS

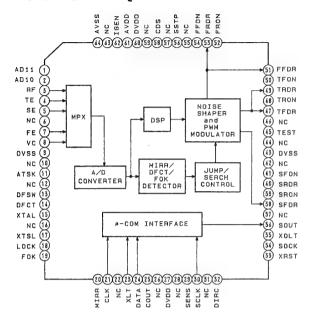
3-1. CIRCUIT BOARDS LOCATION



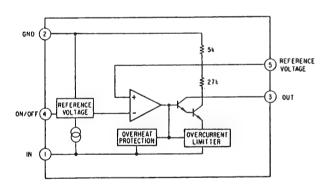


• IC Block Diagrams

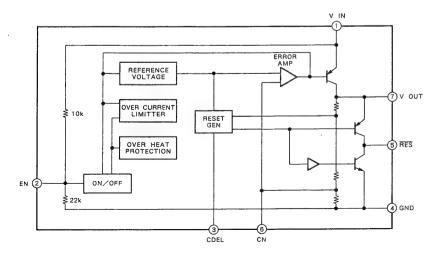
IC101 CXD2501Q



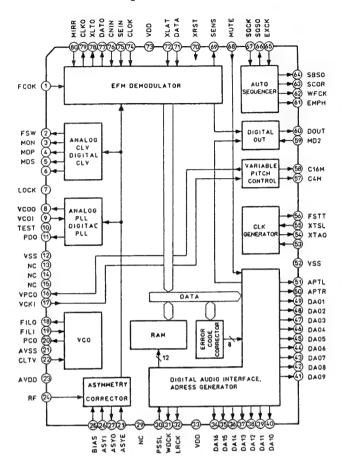
IC201 M5293L



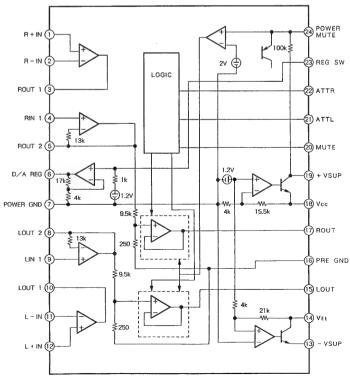
IC202 LA5602



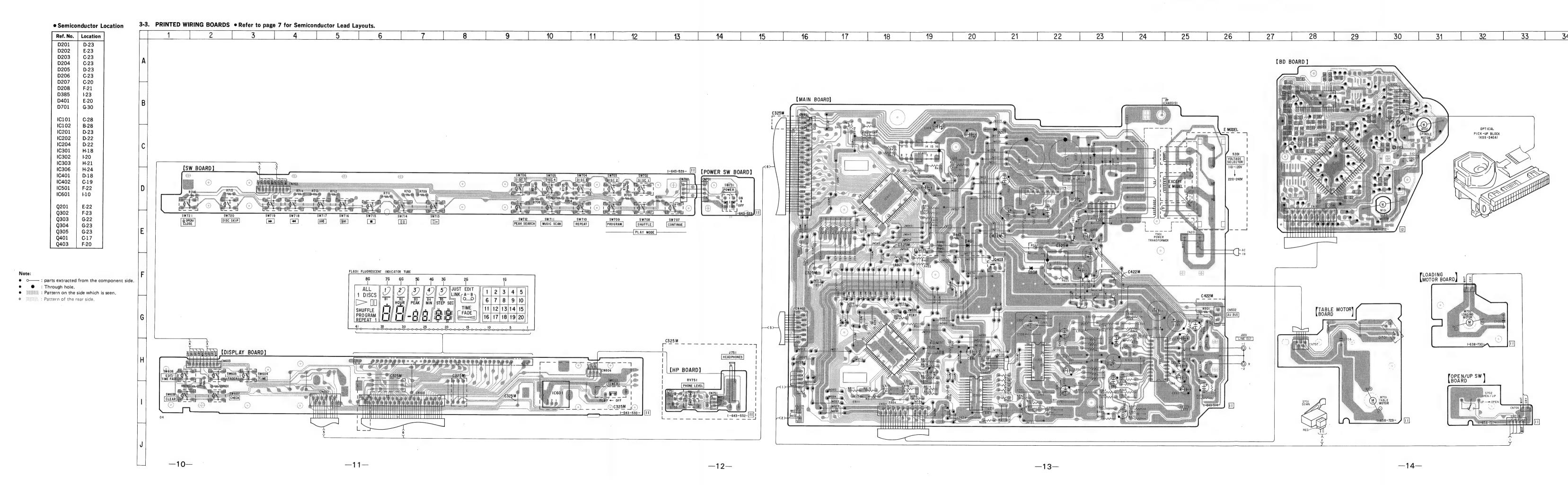
IC301 CXD2500AQ

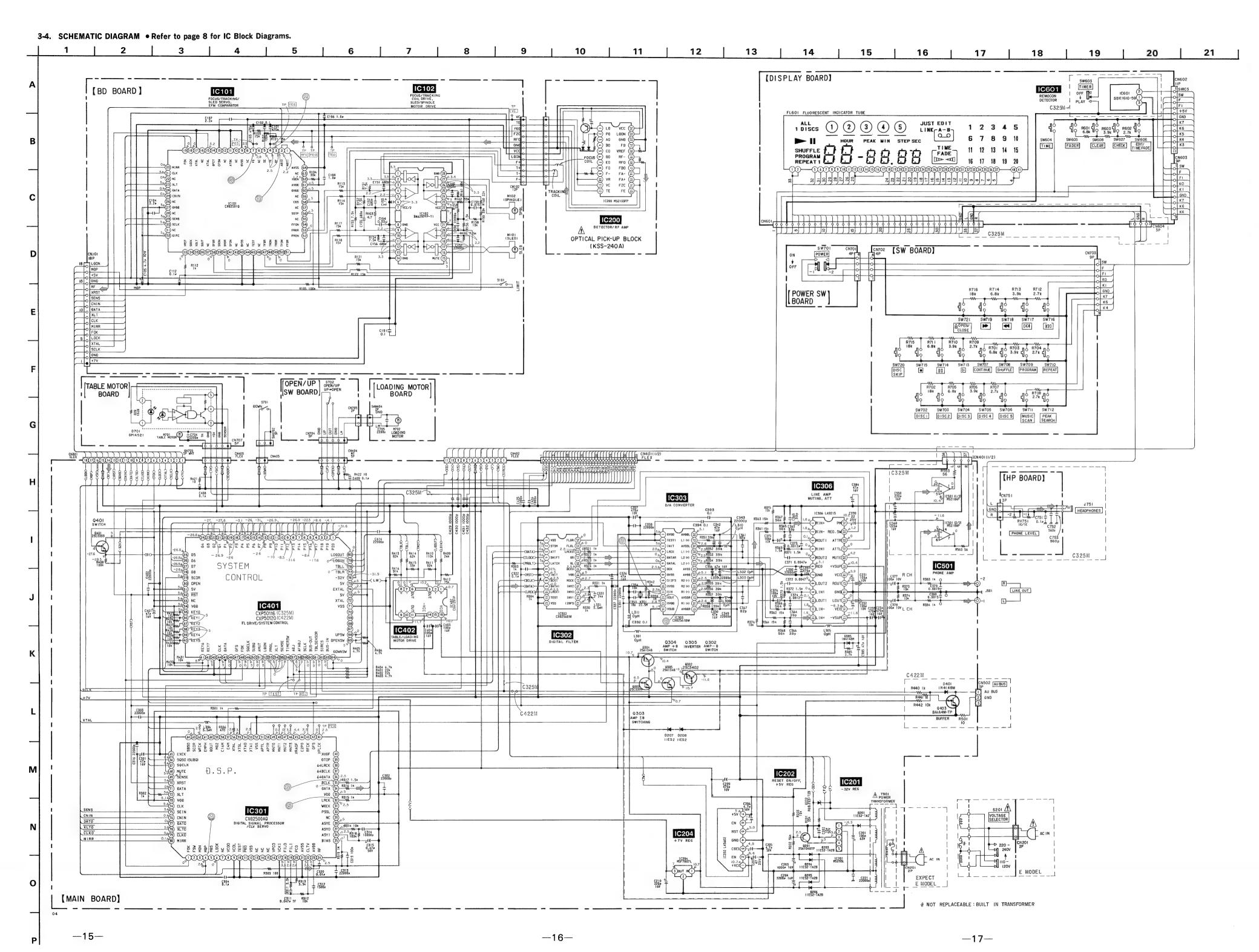


IC306 LA9215



CDP-C325M/C422M CDP-C325M/C422M CDP-C325M/C422M





IC303 (12)

Note

 All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.

IC301 4 PLAY (MDP)

• All resistors are in Ω and $1/4\,\mathrm{W}$ or less unless otherwise specified.

Note: The components identified by mark A or dotted line with mark A are critical for safety.

Replace only with part number specified.

- ⊕ : B+ Line
- ⊚ ==== : B— Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input Impedance 10MΩ)
 Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
 Voltage variations may be noted due to normal produc-
- Voltage variations may be noted due to normal prod tion tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 CD

SECTION 4 EXPLODED VIEWS

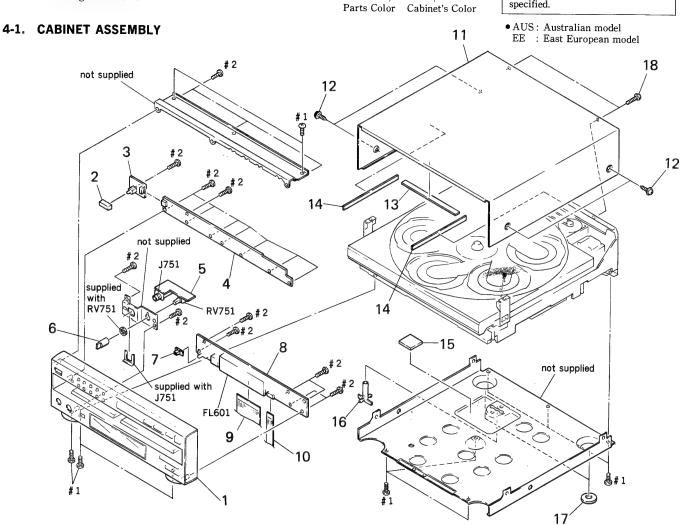
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts Example: KNOB, BALANCE (WHITE)...(RED)

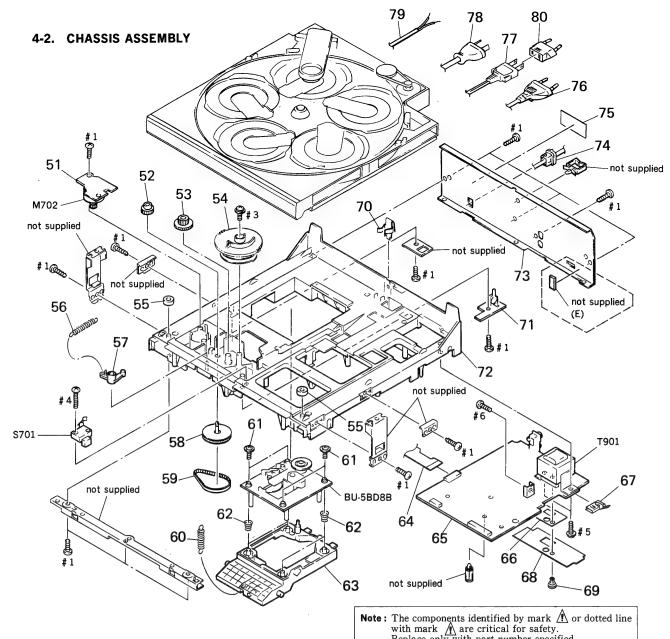
TLANCE (WHITE)...(RED)

• Hardware (# mark) list is given in the last of this parts list.

The components identified by mark \bigwedge or dotted line with mark \bigwedge are critical for safety. Replace only with part number specified.



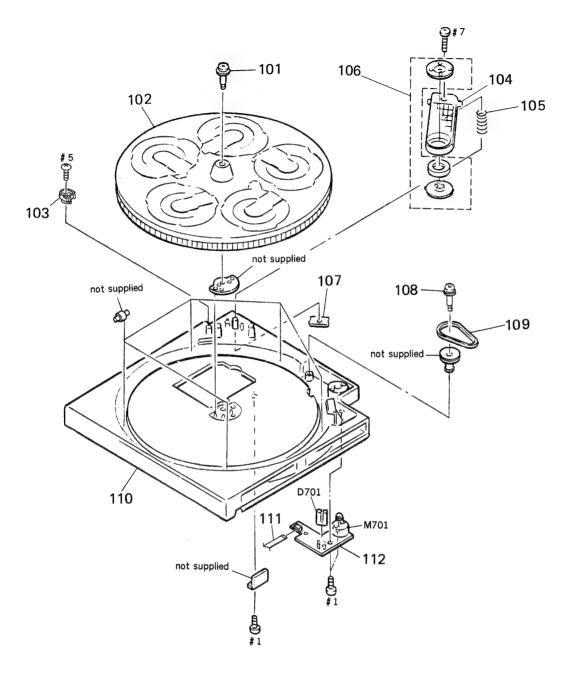
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4942-549-1	PANEL ASSY, FRONT (C325M)		* 11	4-943-992-01	CASE (C325M)	
1	X-4942-550-1	PANEL ASSY, FRONT (C422M)	1	* 11	4-943-992-11	CASE (C422M)	
2	4-951-115-01	BUTTON (POWER) (C325M)		12	3-704-366-01	SCREW (CASE) (M3X8)	
2	4-951-115-11	BUTTON (POWER) (C422M)		* 13	4-929-557-01	CUSHION (PANEL)	
* 3	1-643-533-11	POWER SW BOARD		* 14	4-929-561-01	CUSHION (CASE) (C325M)	
* 4	1-643-529-11	SW BOARD		* 15	4-951-946-01	SHEET	
* 5	1-643-532-11	HP BOARD (C325M)		16	4-937-945-01	PLATE (TRANSPORT), LOCK	
6	4-922-531-11	KNOB (A TYPE), LOV (C325M)		17	4-924-410-01	FELT	
7	4-922-518-01	KNOB (TIMER) (C325M)]	18	3-703-685-21	SCREW (+BV 3X8)	
* 8	1-643-530-11	DISPLAY BOARD		FL601	1-519-721-11	INDICATOR TUBE, FLUORESCENT	
9	1-690-847-11	WIRE (FLAT TYPE) (37 CORE) (C	C325M)	J751	1-691-878-11	JACK (LARGE TYPE) (HEAD PHON	ES) (C325M)
9	1-690-848-11	WIRE (FLAT TYPE) (33 CORE) (0	C422M)	RV751	1-241-031-11	RES, VAR, CARBON 1K/1K (PHON	E LEVEL)
10	1-690-849-11	WIRE (FLAT TYPE) (11 CORE)	•			(C325M)	•



Ref. No.	Part No.	Description Remark	F
* 51	1-638-730-11	LOARDING MOTOR BOARD	1
52	4-934-375-01	GEAR (LOADING B)	1
		GEAR (LOADING C)	1
54	4-934-391-01	GEAR (LOADING A)	1
	4-951-619-01		1
		SPRING (B). TENSION	1
	4-917-519-01		1
58	X-4941-529-1	PULLEY ASSY	
59	4-944-490-01	BELT (TIMING)	1
60	4-937-911-01	SPRING, TENSION	1
61	4-933-134-01	SCREW (+PTPWH M2. 6X6)	1
62	4-949-385-01	SPRING (D). COIL	1
	4-934-373-01		1
		JAMPER, FILM (WITH TARMINAL)	1 4
* 65	A-4649-200-A	MAIN BOARD, COMPLETE (C422M:AEP,EE,UK,AUS)	4
* 65	A-4649-208-A	MAIN BOARD, COMPLETE (C422M:E)	4
* 65	A-4649-209-A	MAIN BOARD, COMPLETE (C325M: AEP, UK, AUS)	4
* 65	A-4649-213-A	MAIN BOARD, COMPLETE (C325M:E)	1 2
* 66	4-951-933-01	SHEET, INSULATING (C325M: AEP, UK, AUS)	
* 67	4-944-581-01	PLATE, GROUND	
* 68	4-944-178-01	SHEET (INSULATING)	2
69	3-531-576-11	RIVET	1
* 70	4-943-996-01	SPRING LEAF	1

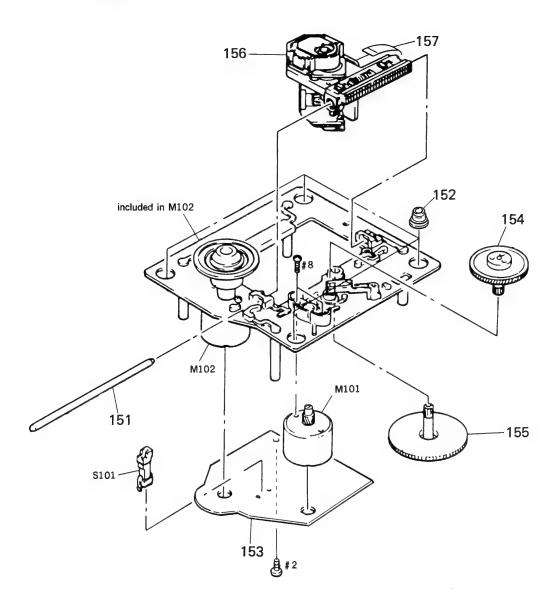
	Replace only	with part number specified.
Ref. No.	Part No.	Description Remark
¥ 71	1-638-731-11	OPEN/UP SW BOARD
¥ 72	4-943-997-01	CHASSIS
		PANEL, BACK (C325M:AEP)
¥ 73	4-949-862-11	PANEL, BACK (C325M:UK, AUS)
¥ 73	4-949-862-21	PANEL, BACK (C325M:E)
¥ 73	4-949-862-31	PANEL, BACK (C422M:AEP,EE)
≱ 73	4-949-862-41	PANEL, BACK (C422M:UK, AUS)
¥ 73	4-949-862-51	PANEL, BACK (C422M:E)
k 74	3-703-244-00	BUSHING (2104). CORD (AEP, EE, UK, AUS)
¥ 74	3-703-571-11	BUSHING (S) (4516). CORD (E)
	4-941-548-01	LABEL, CLASS 1
		CORD, POWER (AEP, EE)
		CORD, POWER (E)
<u>₹</u> 78	1-574-358-11	CORD, POWER (WITH CONNECTOR) (C422M:AUS
<u>↑</u> 78	1-574-358-31	CORD, POWER (WITH CONNECTOR) (C325M:AUS
<u>↑</u> 79	1-558-946-21	CORD. POWER (C325M:UK)
<u>∱</u> 79	1-590-379-11	CORD, POWER (C422M:UK)
<u>^</u> 80	1-569-007-11	ADAPTER. CONVERSION 2P (C325M:E)
M702	A-4604-834-A	MOTOR ASSY. LOADING
\$701	1-572-713-11	SWITCH. PUSH (WITH CONNECTOR) (DOWN)
<u>∱</u> T901	1-449-955-11	TRANSFORMER. POWER (EXCEPT E)
∱ T901	1-449-956-11	TRANSFORMER. POWER (E)

4-3. TRAY ASSEMBLY



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	4-926-384-01	SCREW, STEP		109	4-926-399-01	BELT	
* 102	4-926-383-01	TABLE (B). DISK		110	4-951-121-01	TABLE (A), DISK (C325M)	
* 103	4-949-226-01	PLATE, LOCK		* 110	4-951-121-11	TABLE (A). DISK (C422M)	
* 104	4-930-506-02	BRACKET (PRESS PULLEY)		111	1-590-849-11	WIRE, FLAT TYPE (5 CORE)	
105	4-926-395-01	SPRING, COMPRESSION		* 112	1-638-729-11	TABLE MOTOR BOARD	
* 106	1-452-538-11	MAGNET		D701	8-719-970-19	DIODE GP1A521	
* 107	4-926-388-01	BRACKET (ADJUSTMENT)		M701	A-4604-585-A	MOTOR ASSY, ROTARY	
108	4-923-597-01						

4-4. OPTICAL PICK-UP BLOCK (BU-5BD8)



Note: The components identified by mark \bigwedge or dotted line with mark \bigwedge are critical for safety.

Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
152 * 153 154	A-4649-199-A 4-917-567-01	INSULATOR (BU) BD BOARD, COMPLETE		157 M101 M102	1-575-001-11 X-4917-504-1 X-4917-523-3	DEVICE, OPTICAL KSS-240A WIRE, FLAT TYPE (12 CORE) MOTOR ASSY, SLED MOTOR ASSY, SPINDLE SWITCH, LEAF (LIMIT)	

SECTION 5 ELECTRICAL PARTS LIST

DISPLAY BD POWER SW SW

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS $uF: \mu F$

- RESISTORS All resistors are in ohms METAL: Metal-film resistor METAL OXIDE: Metal Oxide-film resistor
- F: nonflammable COILS
- uH: µH SEMICONDUCTORS SEMICONDOCTORS: In each case, u: μ , for example: uA...: μ A..., uPA...; μ PA..., uPB...: μ PB..., uPC...: μ PC..., uPD...: μ PD...

When indicating parts by reference number, please include the board name.

The components identified by mark for components identified by mark for dotted line with mark for are critical for safety.

Replace only with part number specified.

• AUS: Australian model EE: East European model

Ref. No.	Part No.	Description		Ren	ark	Ref. No.	Part No.	Description			Remark
*	A-4649-199-A	BD BOARD, COMPL	ETE			R112	1-216-049-00	METAL CHIP	1 K	5%	1/10W
		**********				R113	1-216-077-00		15K	5%	1/10W
						R114	1-216-077-00		15K	5%	1/10W
		< CAPACITOR >				R117	1-216-077-00		15K	5%	1/10W
						R118	1-216-077-00		15K	5%	1/10W
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	1110	1 210 011 00	METAE VIII	100	V/•	17 1011
C102		CERAMIC CHIP	0. 1uF		25V	R121	1-216-077-00	METAL CHIP	15K	5%	1/10W
C103		CERAMIC CHIP	470PF	10%	50V	R122	1-216-077-00		15K	5%	1/10W
C104		CERAMIC CHIP	2. 2uF		167	R151	1-216-070-00		7. 5K		1/10W
C105		TANTALUM CHIP	4. 7uF	10%	167	R152	1-216-070-00		7. 5K	5%	1/10W
		***************************************				R153	1-216-070-00		7. 5K		1/10W
C106	1-164-346-11	CERAMIC CHIP	1uF		167	N100	1-210-010-00	MEINE VIII	1. JK	V/I	17 1011
C107		CERAMIC CHIP	2. 2uF		16V	R154	1-216-070-00	METAL CHIP	7. 5K	5%	1/10W
C108		CERAMIC CHIP	1uF		167	R155	1-216-070-00		7. 5K	5%	1/10W
C112		CERAMIC CHIP	0. 1uF		25V	R156	1-216-070-00		7. 5K	5%	1/10W
C151		CERAMIC CHIP	680PF	10%	50V	R157	1-216-085-00		33K	5%	1/10W
0.01	1 100 001 11	VENAMITO VITTI	00011	10/6	307	R157	1-216-035-00		13K	5%	
C152	1-163-007-11	CERAMIC CHIP	680PF	10%	50V	V 120	1-210-010-00	METAL CHIP	138	J70	1/10W
C153		CERAMIC CHIP	0. 1uF	1070	25V	R159	1-216-085-00	METAL CHID	33K	5%	1 /2 014
C154		CERAMIC CHIP	0. 33uF		257	R160	1-216-081-00		22K	5%	1/10W
C155		CERAMIC CHIP	680PF	10%	50V						1/10W
C156		CERAMIC CHIP	680PF	10%	50V	R161	1-216-093-00		68K	5%	1/10W
0130	1-100-007-11	OLIVINIO OIIII	00011	1076	304	R162	1-216-085-00		33K	5% 5%	1/10W
C157	1_163_037_11	CERAMIC CHIP	0. 022uF	10%	25V	R163	1-216-308-00	METAL CHIP	4. 7	97 6	1/10W
C157		CERAMIC CHIP	0. 022uF	10%	25V 25V			4 0001 TOU >			
C159		CERAMIC CHIP	0. 022ur	5%	50V			< SWITCH >			
C160		CERAMIC CHIP	0. 0068uF	10%	50V	:0101	1 570 005 11	OWLTON 1545 /	111171		
C181		CERAMIC CHIP	0. 1uF	10/4	25V	\$101		SWITCH, LEAF (
V101	1-103-030-00		v. tur		234	******	*******	**********	******	*****	******
		< CONNECTOR >				*	1-643-530-11	DISPLAY BOARD			
CN101	1-568-861-11	SOCKET. CONNECTO	OR 18P			*	1_642_522_11	POWER SW BOARD			
		SOCKET. CONNECTO				•	1-043-333-11	***********			
011102		0001111	121		l	*	1-643-529-11				
		< 10 >				7	1-045-525-11	*****			
IC101	8-752-344-48	IC CXD25010						< CONNECTOR >			
IC102	8-759-071-79	IC BA6297AFP								~	*** ******
		< RESISTOR >						SOCKET, CONNECT		-	
		v ucolotok >			1	* CN601		SOCKET, CONNECT			
0101	1_916_077_00	METAL AUTO	1CV EW	1 / 1 011	l	* CN602		SOCKET, CONNECT	-		1117
R101 R102	1-216-077-00		15K 5%	1/10W		* CN604		PIN, CONNECTOR		25M)	
	1-216-097-00		100K 5%	1/10W		* CN701	1-565-295-11	PLUG. CONNECTO	4P		
R103	1-216-077-00		15K 5%	1/10W	ļ						
R104	1-216-085-00		33K 5%	1/10W		* CN702		CONNECTOR, BOAI		UARD 4	4 r
R105	1-216-097-00	MEIAL UNIF	100K 5%	1/10W		* CN/03	1-568-94/-11	PIN, CONNECTOR	91		
					- 1						

DISPLAY

SW

HP

LOADING MOTOR

POWER SW

SW714 1-554-303-21 SWITCH, TACTILE ([][])

OPEN/UP SW TABLE MOTOR Ref. No. Part No. Description Remark Remark Ref. No. Part No. Description SW715 1-554-303-21 SWITCH, TACTILE (■) < 10 > SW716 1-554-303-21 SWITCH, TACTILE (⋈<) IC601 8-741-100-48 IC SBX1610-59 (C325M) SW717 1-554-303-21 SWITCH, TACTILE (▷▷) SW718 1-554-303-21 SWITCH, TACTILE (◄◄) SW719 1-554-303-21 SWITCH. TACTILE (▶▶) < FLUORESCENT INDICATOR > FL601 1-519-721-11 INDICATOR TUBE. FLUORESCENT SW720 1-554-303-21 SWITCH. TACTILE (DISC SKIP) SW721 1-554-303-21 SWITCH, TACTILE (AOPEN/CLOSE) **************** < RESISTOR > 6.8K 5% 1/4W 1-643-532-11 HP BOARD (C325M) 1-249-427-11 CARBON R601 1-249-422-11 CARBON 2.7K 5% 1/4W ******* R602 1-249-424-11 CARBON 3. 9K 5% 1/4W R603 < CAPACITOR > R701 1-249-427-11 CARBON 6. 8K 5% 1/4W 1-249-432-11 CARBON R702 18K 1/4W 1-164-159-11 CERAMIC 0. 1uF 50V C751 R703 1-249-424-11 CARBON 3.9K 5% 1/4W (C325M) 1-249-422-11 CARBON 2.7K 5% 1/4W 1-162-291-31 CERAMIC 560PF 10% SAV C752 R704 (C325M) R705 1-249-427-11 CARBON 6.8K 5% 1/4W 1-249-424-11 CARBON 560PF 10% 50V 3. 9K 5% 1/4W C753 1-162-291-31 CERAMIC R706 1-249-422-11 CARBON 2. 7K (C325M) R707 5% 1/4W < JACK > 1-249-422-11 CARBON 2. 7K 5% 1/4W R708 R709 1-249-422-11 CARBON 2.7K 5% 1/4W J751 1-691-878-11 JACK (LARGE TYPE) (HEADPHONES) (C325M) 1-249-424-11 CARBON 3.9K 5% 1/4W R710 6.8K 5% 1/4W 1-249-427-11 CARBON R711 1-249-422-11 CARBON 2. 7K 5% 1/4W < VARIABLE RESISTOR > R712 RV751 1-241-031-11 RES, VAR, CARBON 1K/1K (PHONE LEVEL) 1-249-424-11 CARBON 3.9K 5% 1/4W 1-249-427-11 CARBON 6.8K 5% 1/4W (C325M) R714 ****************** 1-249-432-11 CARBON 18K 5% 1/4W R715 1-249-432-11 CARBON 18K 1/4W R716 1-638-730-11 LOADING MOTOR BOARD ****** < SWITCH > 1-638-731-11 OPEN/UP SW BOARD SW603 1-570-157-51 SWITCH, SLIDE (TIMER) (C325M) *********** 1-638-729-11 TABLE MOTOR BOARD SW604 1-554-303-21 SWITCH, TACTILE (TIME) SW605 1-554-303-21 SWITCH. TACTILE (FADER) ******** SW606 1-554-303-21 SWITCH, TACTILE (EDIT/TIME FADE) SW607 1-554-303-21 SWITCH, TACTILE (CHECK) < CAPACITOR > SW608 1-554-303-21 SWITCH, TACTILE (CLEAR) C704 1-161-375-00 CERAMIC 0.0022uF 50V SW701 1-572-714-11 SWITCH. PUSH (POWER) 1-161-375-00 CERAMIC 0 0022HF 20% 50V C705 SW702 1-554-303-21 SWITCH, TACTILE (DISC 1) SW703 1-554-303-21 SWITCH, TACTILE (DISC 2) < CONNECTOR > SW704 1-554-303-21 SWITCH, TACTILE (DISC 3) * CN705 1-573-383-11 PIN, CONNECTOR (PC BOARD) 2P * CN707 1-573-044-11 SOCKET, CONNECTOR 5P SW705 1-554-303-21 SWITCH, TACTILE (DISC 4) SW706 1-554-303-21 SWITCH, TACTILE (DISC 5) SW707 1-554-303-21 SWITCH. TACTILE (CONTINUE) < DIODE > SW708 1-554-303-21 SWITCH. TACTILE (SHUFFLE) SW709 1-554-303-21 SWITCH, TACTILE (PROGRAM) D701 8-719-970-19 DIODE GP1A521 < RESISTOR > SW710 1-554-303-21 SWITCH, TACTILE (REPEAT) SW711 1-554-303-21 SWITCH, TACTILE (MUSIC SCAN) SW712 1-554-303-21 SWITCH, TACTILE (PEAK SEARCH) R701 1-249-416-11 CARBON 820 5% 1/4W SW713 1-554-303-21 SWITCH, TACTILE (▷)

LOADING MOTOR OPEN/UP SW TABLE MOTOR MAIN

Ref. No.	Part No.	Description		Re	mark	Ref. No.	Part No.	Description		Re	mark
		< SWITCH >				C353	1-162-205-31	CERAMIC	18PF	5%	50V
						C354	1-162-205-31	_	18PF	5%	50V
\$702	1-571-300-21	SWITCH, ROTA	RY (OPEN/UP)			C355	1-161-494-00		0. 022uF	•••	25V
			******	*****	****	C356	1-126-022-11		47uF	20%	167
********						C357	1-124-997-11		470uF	20%	107
*	A-4649-200-A	MAIN BOARD.	COMPLETE (C422)	A:AFP. FF	.UK.AUS)	0001	1 124 551 11	22201	41001	20%	101
*			COMPLETE (C422		, 011,100,	C358	1-161-494-00	CERAMIC	0. 022uF		25V
*			COMPLETE (C325		K VIIS)	C361	1-162-280-31		82PF	10%	50V
*			COMPLETE (C325		K, 700)	C363	1-162-213-31		39PF	5%	50V
•	N 4040 E10 N		******		*****	C364	1-162-213-31		39PF	5%	50V
		**********	***********	******	******	C365	1-162-213-31		39PF	5%	50V
	7-682-548-04	SCREW +RVTT	3X8 (S)			0000	1 102 210 01	CENAMIO	0311	0,4	301
	1 002 040 04	VVII.	V/10 (0)			C366	1-162-213-31	CERAMIC	39PF	5%	50V
		< CAPACITOR	`			C367	1-162-280-31		82PF	10%	50V
		V ONI NOTION				C371	1-130-479-00		0. 0047uF	5%	50V
C201	1-124-572-11	FLECT	100uF	20%	63V	C372	1-130-479-00		0. 0047uF	5%	50V
C201	1-126-059-11		10uF	20%	50V	C373	1-130-473-00		0. 00474F	5%	50V
C202	1-124-360-00		1000uF	20%	167	6373	1-130-412-00	MILAN	0. 00 12 ur	3/4	301
C203	1-124-380-00		3300uF	20%	16V	C374	1-130-472-00	MVI AD	0. 0012uF	5%	50V
C204	1-124-007-00		4. 7uF	20%	50V	C375	1-124-994-11		100uF	20%	107
6203	1-120-103-11	ELECT	4. /ur	20%	304	C375	1-124-994-11		100uF	20%	107
0206	1-126-163-11	ELECT	4. 7uF	20%	50V	C377	1-124-994-11		100uF	20%	107
C206	1-124-910-11		4. 70F	20%	50V	C378	1-124-994-11		100uF	20%	107
C207			470r 470uF			6319	1-124-334-11	ELEGI	10001	20%	104
C209 C210	1-124-997-11		470uF 220uF	20%	107	C379	1-130-473-00	MVI AD	0. 0015uF	5%	50V
	1-126-024-11			20%	16V	C379	1-130-473-00		0. 0015uF	5%	50V
C221	1-161-494-00	CERAMIC	0. 022uF		25V	C384	1-130-473-00		47uF	20%	16V
	1 100 010 11	FLEAT	005	004	0514						16V
C230	1-126-049-11		22uF	20%	25V	C385	1-126-022-11		47uF	20%	25V
C231	1-124-994-11		100uF	20%	10V	C390	1-161-494-00	CERAMIC	0. 022uF		2 3 V
C232	1-124-994-11		190uF	20%	10V	0001	1 104 007 11	CLEAT	4705	0.08/	101/
C233	1-126-012-11		470uF	20%	167	C391	1-124-997-11		470uF	20%	10V 50V
C234	1-126-012-11	ELECT	470uF	20%	167	C392	1-164-159-11		0. 1uF		
		51 507	42.6			C393	1-164-159-11		0. 1uF		50V
C301	1-126-022-11		47uF	20%	16V	C394	1-164-159-11		0. 1uF 47uF °	0.01/	50V 16V
C302	1-161-494-00		0. 022uF		25V	C401	1-126-022-11	ELEVI	4/UF *	20%	104
C303	1-161-494-00		0. 022uF		25V	0.400	1 161 404 00	CERANIC	0. 022uF		25V
C304	1-164-159-11		0. 1uF	Par	50V	C402	1-161-494-00		0. 022ur 100uF	0.00/	
C311	1-130-491-00	MYLAK	0. 047uF	5%	50V	C403	1-126-023-11		100uF	20% 20%	16V 16V
0010		0504440	A AA45 5			C404 C408	1-126-023-11		0. 1uF	20%	50V
C312	1-161-374-11		0. 0015uF	20%	50V	C408			0. 1uF		50V
C313	1-161-494-00		0. 022uF	0.044	25V	0403	1-164-159-11	OFWWIA	v. 14F		90 ¥
C314	1-162-306-11		0. 01uF	20%	16V	C414	1-161-494-00	CEDANIC	0. 022uF		25V
C315	1-126-300-11		0. 47uF	20%	50V					1.04	
C316	1-161-494-00	CEKAMIC	0. 022uF		25V	C425 C426	1-162-294-31		0.001uF 0.001uF	10% 10%	50V 50V
		0504440	44405			C428	1-162-294-31		0. 00 tur 0. 00 tur		50V
C319	1-162-282-31		100PF	10%	50V	C429	1-162-294-31		0. 00 tur 0. 00 tur	10%	
C320	1-130-483-00		0. 01uF	5%	50V	C430	1-102-294-31	CENAMIC	0. 00 lar	10%	50V
C322	1-164-159-11		0. 1uf	64/	50V	C431	1-162-294-31	CEDANIC.	0. 001uF	104	50V
C331	1-162-208-31		24PF	5%	50V				0. 00 luF	10%	
C336	1-126-022-11	FFFCI	47uF	20%	16V	C432 C550	1-162-294-31 1-126-024-11		0. 00 Tur 220uF	10% 20%	50V 16V
****		AFR4444 *				C330	1-120-024-11		22041	20%	104
C337	1-161-494-00		0. 022uF		25V	CECA	1-126-024-11	(C325M)	2205	204	161/
C342	1-126-022-11		47uF	20%	16V	C560	1-120-024-11		220uF	20%	16V
C343	1-161-494-00		0. 022uF		25V			(C325M)			
C349	1-161-494-00		0. 022uF		25V			/ CONNECTOR S			
C350	1-126-022-11	ELECT	47uF	20%	16V			< CONNECTOR >			
	1					4 00001	1_570 647 44	DIN CONSCOTOR	/DO DOADO	6 D	
C351	1-161-494-00	CERAMIC	0. 022uF		25V	∓ UNZUI	1-3/3-04/-11	PIN. CONNECTOR	(FC BUAKU)	2r	
					1						

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description			Remark
		SOCKET, CONNECTOR (L TYPE) 188				< TRANSISTOR	>		
		SOCKET, CONNECTOR (L TYPE) 33F							
		SOCKET, CONNECTOR (L TYPE) 371		Q201			2SA1175		
		SOCKET, CONNECTOR (L TYPE) 11F	'	Q302	8-729-900-80		DTC114E	-	
* CN403	1-568-824-11	SOCKET, CONNECTOR 5P		0303	8-729-900-89		DTC144E		
				Q304	8-729-900-61		DTA114E		
		PIN. CONNECTOR 5P		Q305	8-729-900-61	TRANSISTOR	DTA114E	S	
* CN502	1-565-561-11	PIN. CONNECTOR 3P (AU BUS) (C4	122M)						
				Q401			DTC144E		
		< DIODE >		Q403	8-729-900-80	TRANSISTOR	DTC114E	S (C422M))
D201	8-719-200-82					< RESISTOR >			
D202	8-719-110-08								
D203	8-719-200-82			R201	1-249-435-11	CARBON	33K		/4W
D204	8-719-200-82			R202	1-249-438-11	CARBON	56K		/4W
D205	8-719-200-82	DIODE 11ES2		R203	1-249-429-11	CARBON	10K		/4W
				R301	1-249-417-11		1 K		/4W
D206	8-719-200-82			R302	1-249-417-11	CARBON	1 K	5% 1,	/4W
D207	8-719-200-82								
D208	8-719-200-82			R303	1-249-417-11		1K		/4₩
D385	8-719-987-63			R304	1-249-417-11		1K		/4W
D401	8-719-987-63	DIODE 1N4148M (C422M)		R306	1-249-413-11		470		/4W
				R309	1-249-405-11		100		/4W
		< 10 >		R311	1-249-423-11	CARBON	3. 3K	5% 1,	/4W
	8-759-633-42			R312	1-249-429-11		10K		/4W
	8-759-061-65			R313	1-249-423-11		3. 3K		/4W
1C204	8-759-604-86	IC M5F7807L		R314	1-249-429-11	CARBON	10K		/4W
	8-752-337-26			R315	1-249-417-11		1 K		/4W
1C302	8-752-342-65	IC CXD2560M		R316	1-249-417-11	CARBON	1 K	5% 1,	/4W
IC303	8-752-351-19	IC CXD2561BM		R317	1-249-419-11	CARBON	1. 5K	5% 1,	/4W
	8-759-061-66			R318	1-249-441-11	CARBON	100K	5% 1,	/4W
	8-752-837-03			R319	1-247-903-00	CARBON	1M	5% 1,	/4W
	8-752-837=01	•		R321	1-249-417-11		1 K	5% 1,	/4W
1C402	8-759-821-32	IC CXA1291P	ļ	R322	1-249-417-11	CARBON	1 K	5% 1,	/4W
		LO EFFERN TORONTO		0202	1 040 417 11	CADDON	14	EW 1	/ MU
10501	8-159-634-51	IC M5218AP (C325M)		R323 R324	1-249-417-11 1-249-417-11		1 K 1 K		/4W /4W
		. 1404		R324			1 K		/4W /4W
		< JACK >			1-249-417-11				
IEA4	1 560, 110 44	IACK DIN 3D (LINE OUT)		R331 R342	1-249-417-11		1 K 1 K		/4W /4W
J501	1-309-442-11	JACK, PIN 2P (LINE OUT)		N042	1-245-417-11	CARDON	11.	V/I 1/	/ 411
		< COIL >		R351	1-249-436-11		39K		/4W
			j	R352	1-249-436-11	CARBON	39K		/4W
L301	1-412-473-21	INDUCTOR Out		R353	1-249-436-11		39K		/4W
L302	1-412-473-21	INDUCTOR Out	1	R354	1-249-436-11		39K		/4W
L303	1-412-473-21	INDUCTOR Out		R355	1-249-436-11	CARBON	39K	5% 1,	/4W
L305	1-412-473-21	INDUCTOR Out	1						
L306	1-412-297-11	INDUCTOR 3. 3uH		R356	1-249-436-11		39K		/4W
				R357	1-249-436-11		39K	-	/4W
L309	1-412-473-21	INDUCTOR Out	1	R358	1-249-436-11		39K		/4W
L310	1-412-473-21	INDUCTOR Out		R359	1-247-903-00		1M		/4W
L311	1-412-473-21	INDUCTOR Out		R361	1-249-431-11	CARBON	15K	5% 1,	/4W
L331	1-412-297-11	INDUCTOR 3. 3uH							
				R362	1-249-431-11		15K	-	/4W
			ł	R363	1-249-431-11		15K		/4W
				R364	1-249-431-11	CARBON	15K	5% 1,	/4W
			ı						

MAIN

Ref. No.	Part No.	Description			Rema	ark	Ref. No.	Part No.	Description	Remark
R365	1-249-438-11	CARBON	56K	5%	1/4W				< SWITCH >	
R366	1-249-438-11	CARBON	56K	5%	1/4W					
R367	1-249-438-11	CARBON	56K	5%	1/4W		∱ \$201	1-571-722-11	SWITCH, VOLTAGE SELECTION	
R368	1-249-438-11		56K	5%	1/4W		21,020		(VOLTAGE SELECTOR) (E)	
R369	1-249-419-11		1. 5K	5%	1/4W				(**************************************	
					•				< CRYSTAL >	
R370	1-249-419-11	CARBON	1. 5K	5%	1/4W					
R371	1-249-419-11	CARBON	1. 5K	5%	1/4W		X351	1-579-314-11	VIBRATOR, CRYSTAL (22.5MHz)	
R372	1-249-419-11	CARBON	1. 5K	5%	1/4W				**********	******
R373	1-249-429-11	CARBON	10K	5%	1/4W					
R374	1-249-429-11	CARBON	10K	5%	1/4W	:			MISCELLANEOUS **********	
R375	1-249-429-11	CARBON	10K	5%	1/4W					
R376	1-249-429-11	CARBON	10K	5%	1/4W		9	1-690-847-11	WIRE (FLAT TYPE) (37 CORE) (C3	25M)
R383	1-249-417-11	CARBON	1K	5%	1/4W	ļ	9		WIRE (FLAT TYPE) (33 CORE) (C4	
R384	1-249-417-11	CARBON	1 K	5%	1/4W		10	1-690-849-11	WIRE (FLAT TYPE) (11 CORE)	
R385 .	1-249-422-11	CARBON	2.7K	5%	1/4W		64	1-694-003-11	JAMPER, FILM (WITH TARMINAL)	
							 ↑76	1-575-651-21	CORD, POWER (AEP, EE)	
R401	1-249-433-11	CARBON	22K	5%	1/4W					
R402	1-249-433-11	CARBON	22K	5%	1/4W		 ↑77	1-575-653-21	CORD, POWER (E)	
R403	1-249-425-11	CARBON	4. 7K	5%	1/4W		₹ 78	1-574-358-11	CORD. POWER (WITH CONNECTOR) (C	(422M: AUS)
R404	1-249-425-11	CARBON	4. 7K		1/4W		 ₹78	1-574-358-31	CORD. POWER (WITH CONNECTOR) (C	325M: AUS)
R405	1-249-425-11	CARBON	4. 7K	5%	1/4W		<u></u> 19	1-558-946-21	CORD, POWER (C325M:UK)	
							 ↑79	1-590-379-11	CORD, POWER (C422M:UK)	
R406	1-249-425-11		4. 7K		1/4W					
R408	1-249-441-11		100K		1/4W		<u></u> 80		ADAPTER, CONVERSION 2P (C325M:	: E)
R409	1-247-864-11		24K	5%	1/4W		* 106	1-452-538-11		
R410	1-247-880-11		110K		1/4W		111		WIRE, FLAT TYPE (5 CORE)	
R411	1-249-440-11	CARBON	82K	5%	1/4W		<u></u> 156		DEVICE, OPTICAL KSS-240A	
		A. B. B. B. B. W.	254		4.4400		157	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
R412	1-247-876-11		75K	5%	1/4₩	ĺ				
R413	1-249-440-11		82K	5%	1/4W		M101		MOTOR ASSY, SLED	
R414	1-247-874-11		62K	5%	1/4W		M102		MOTOR ASSY, SPINDLE	
R415	1-249-435-11		33K	5%	1/4W		M701		MOTOR ASSY, ROTARY	
R416	1-247-878-00	CARBON	9 1 K	5%	1/4W		M702		MOTOR ASSY, LOADING	(DAYAI)
D / 0.1	1 040 202 11	CARRON	10	5%	1/4W	ĺ	\$701	1-5/2-/13-11	SWITCH, PUSH (WITH CONNECTOR)	(DOWN)
R421	1-249-393-11		10	5%	1/4W		A T001	1 440 055 11	TRANSFORMER ROWER (EVAERT E)	
R422 R425	1-249-393-11		10K	5%	1/4W		↑ T901		TRANSFORMER, POWER (EXCEPT E)	
R425	1-249-429-11		10K	5%	1/4W		<u> </u>	1-449-930-11	TRANSFORMER, POWER (E)	
R427	1-249-429-11		10K	5%	1/4W		*******		**********	
N441	1-243-423-11	VAIIDVII	144	0/4	17 7/1		*****	**********	r T T T T T T T T T T T T T T T T T T T	*******
R428	1-249-429-11	CARBON	10K	5%	1/4W					
R429	1-249-429-11		10K	5%	1/4W					
R430	1-249-429-11		10K	5%	1/4W					
R431	1-249-429-11		10K	5%	1/4W					
R432	1-249-429-11		10K	5%	1/4W					
R440	1-249-417-11	CARBON	1 K	5%	1/4W (C4	422M)				
R441	1-249-417-11		1 K	5%	1/4W (C4	422M)				
R442	1-249-429-11	CARBON	10K	5%	1/4W (C4					
R501	1-249-393-11	CARBON	10	5%	1/4W (C4					
R553	1-249-402-11	CARBON	56	5%	1/4W (C3	325M)				
R563	1-249-402-11	CARBON	56	5%	1/4W (C3	3 2 5M)				

Note: The components identified by mark \bigwedge or dotted line with mark \bigwedge are critical for safety.

Replace only with part number specified.

Ref. No. Part No. Description Remark ACCESSORIES & PACKING MATERIALS ***************** 1-558-271-11 CORD, CONNECTION (C325M:AEP) 1-558-271-11 CORD, CONNECTION (C422M:AEP, EE) 1-693-053-11 REMOTE COMMANDER (RM-D325) (C325M) 2-181-754-01 COVER. BATTERY (C325M) 3-754-847-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH. SPANISH, PORTUGUESE) 3-754-847-41 MANUAL, INSTRUCTION (GERMAN, DUTCH. SWEDISH, ITALIAN) (AEP, EE) 4-944-040-01 CUSHION (FRONT) 4-944-041-01 CUSHION (REAR) 4-951-269-11 INDIVIDUAL CARTON (C325M) 4-951-269-21 INDIVIDUAL CARTON (C422M: AEP, EE, AUS)

HARDWARE LIST

#1	7-685-646-79	SCREW +BVTP	3X8	TYPE2 N-S
		BARCH . STR. /	01/0	THATA H A

#2 7-685-134-19 SCREW +BTP 2.6X8 TYPE2 N-S #3 7-682-661-09 SCREW +PSW 4X8

#4 7-685-136-19 SCREW +P 2. 6X12 TYPE2 NON-SLIT

#5 7-685-647-79 SCREW, TAPPING

#6 7-682-548-04 SCREW +BVTT 3X8 (S)

#7 7-682-554-04 SCREW +B 3X25

#8 7-621-255-15 SCREW +P 2X3

SS-D55AV

SERVICE MANUAL

SPECIFICATIONS

Speaker system

3-way

Speaker units

Woofer: 22cm, cone type

Mid-range: 6.5cm, cone type

Tweeter: 6.5cm, cone type

Enclosure type
Rated impedance

e

.....

6 ohms

Bass reflex

Power handling capacity

Maximum 100W

Sensitivity

91dB/W/m

Frequency range

40Hz to 20,000Hz

Dimensions

Approx. 270 \times 455 \times 285mm (w/h/d)

 $(10\frac{3}{4} \text{ inch} \times 18 \text{ inch} \times 11\frac{1}{4} \text{ inch})$

Weight

Approx. 6.3kg per speaker, net

(13 lb 14 oz)

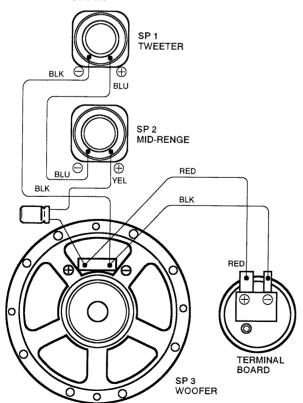
Design and specifications subject to change without notice.

E Model Tourist Model



This set is the speaker system in LBT-A50/A50CD/A50CDM

1. WIRING DIAGRAM



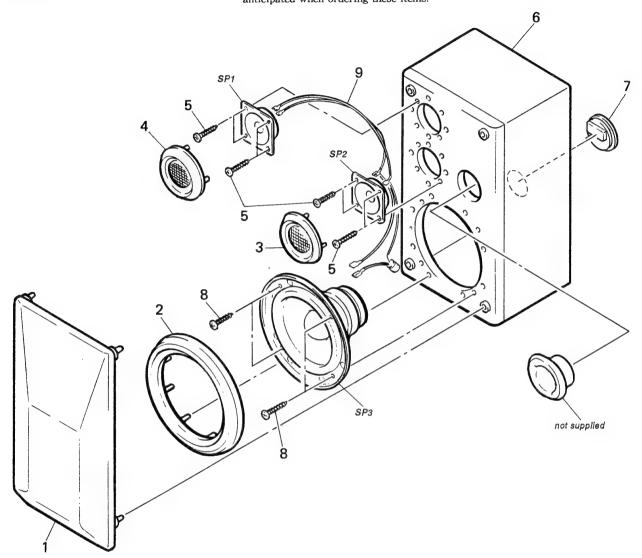
SPEAKER SYSTEM

SONY®

2. EXPLODED VIEW

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.



Ref. No.	Part No. Description	Remark
1	X-4942-366-1 FRAME ASSY, GRILLE	
2	X-4942-595-1 FRAME (W) ASSY, ORNAMENTAL	
3	X-4942-368-1 FRAME (M) ASSY, ORNAMENTAL	
4	X-4942-372-1 FRAME (T) ASSY, ORNAMENTAL	
5	4-874-614-21 SCREW (4) (3.5X14), TAPPING	
6	X-4942-370-1 CABINET (L) ASSY, SPEAKER	
6	X-4942-371-1 CABINET (R) ASSY, SPEAKER	
7	1-537-145-11 TERMINAL BOARD (SPEAKER)	
8	4-923-040-01 SCREW (4X16), TAPPING	
9	1-575-637-11 CORD, CONNECTION	
SP1	1-544-730-11 SPEAKER (6CM)	
SP2	1-544-730-11 SPEAKER (6CM)	
SP3	1-544-751-11 SPEAKER (20CM)	

LBT-D507/D507CD/D507CDM

SERVICE MANUAL

AEP Model East European Model

> UK Model LBT-D507CD/D507CDM

These systems are composed of following models.

As for the service manual, it is issued for each component model, then, please refer to it.

COMPONENT MODEL NAME FOR THESE SYSTEM

	LBT-D507				LBT-D507CD	LBT-D507CDM	
	AEP	G	IT	EE	UK		
AMPLIFIER				TA-D	507		
CASSETTE DECK				TC-D5	507		
TUNER				ST-D7	707		
CD PLAYER	CDP-M43						
CD CHANGER	C	CDP-C422M				CDP-C422M	
TURNTABLE SYSTEM	PS-D707			PS-I	_X47P		
SPEAKER SYSTEM	SS-A507			SS-A507E			

PARTS LIST

3 : Germany model 17 : Italian model EE : East European model

 Items marked "*" are not stocked since they are seldom required for routine service.

Some delay should be anticipated when ordering these items.

Part No.	Description	Remarks	Part No.	<u>Description</u>	<u>Remarks</u>
1-501-369-11 1-501-374-11	ANTENNA ANTENNA LOOP	(EXCEPT G)	3-754-664-51	MANUAL, INSTRUCTION (D. NL.	S, ()
1-559-533-11	CORD, CONNECTION (TA-CDP)	(D507CDM)	3-754-664-61	(AEP, G, IT) MANUAL, INSTRUCTION (English	, D, SU, PL)
1-574-314-11 1-590-822-11	CORD (WITH CONNECTOR) (ST-CDP) CORD (WITH CONNECTOR) (ST-TA-TC)	`	2 754 047 11	(EE)	E
1-590-622-11	COND (WITH CONNECTOR) (ST-TA-TC,	,	3–754–847–11	MANUAL, INSTRUCTION (English (D507CDM)	i, F, E, P)
1-590-823-11	CORD (WITH CONNECTOR) (ST-TA-TC))			
1-693-032-11	COMMANDER (STANDARD TYPE) (RM-S	571)	* 4-951-714-01	INDIVIDUAL, CARTON (FOR TA, S	T, TC) (AEP, EE)
3-707-584-01	COVER, BATTERY (RM-S571)		* 4-951-715-01	INDIVIDUAL, CARTON (FOR TA,	TC) (AEP, G, IT)
3-754-664-11	MANUAL, INSTRUCTION (English) (* 4-951-717-01	INDIVIDUAL CARTON (UK)	
3-754-664-41	MANUAL, INSTRUCTION (English, F,	E, P) (AEP)			
		•	F : French	S: Swedish	
			E: Spanish P: Portuguese	I: Italian SU: Russian	
			D : German	PL: Poland	

NL: Dutch (Holland)

STEREO COMPONENT SYSTEM
SONY



Sony Corporation
Audio Group

English 92B1863-1 Printed in Japan © 1992.2

Published by Customer Relations and Service Group

9-957-048-11

TA-D507

SERVICE MANUAL

AEP Model UK Model East European Model



This set is the amplifier section in LBT-D507/D507CD/D507CDM.

SPECIFICATIONS

Continuous RMS power output

Music power output

60 W + 60 W

(6 ohms, at 1 kHz, 5 % THD)

50 W + 50 W

(6 ohms, DIN, 1 kHz)

90 W + 90 W

(6 ohms, at 1 kHz, 10 % THD)

Input	Jack type	Sensitivity	Impedance
PHONO (MM)	Phono	3.3 mV	47 kohms
VIDEO	Phono	270 mV	47 kohms

Audio output	Jack type	Impedance
SURROUND SPEAKER	Phono	Accepts speakers of 16 ohms
HEADPHONES	Stereophone	Accepts headphones of 8 ohms or more

Frequency response Power requirements

Power consumption Weight

Weight Dimensions 10 Hz to 50 kHz ⁻⁰₃ dB 220 – 230 V AC, 50/60 Hz

150 W

Approx. 6.0 kg

Approx. 355 / 132 → 320 mm (w/h/d, including projectors)

Design and specifications are subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.



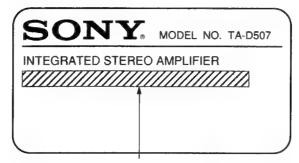
INTEGRATED STEREO AMPLIFIER SONY®

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MODEL IDENTIFICATION

- Model Number Portion -



AEP, Italian, East Europian model : AC : 220-230V \sim 50 / 60Hz Germany model : SYSTEM LBT-D507 AC : 220-230V \sim 50 / 60Hz

UK model : AC : 240V ~ 50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK A OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

2-2. SCHEMATIC DIAGRAMS - PANEL Section -

2

3

SECTION 1 GENERAL

7 8

20

19

9

This section is extracted from instruction manual.

В

 \mathbf{C}

M

N

Location of Controls

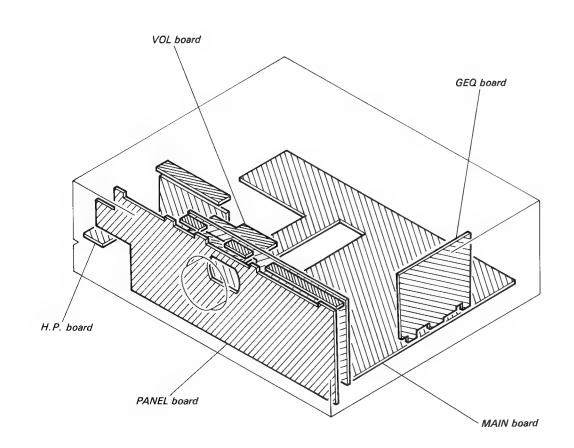
- 1 POWER switch (16)
- 2 EFFECT button and indicator (60)
- 3 DBFB button and indicator (18)
 4 DBFB LEVEL control and indicator (18)
- 5 BALANCE control (18)
- 6 VOLUME control (18)
 7 FLAT button (62)
- 8 Function selectors and indicators
- 9 EQ REC button and indicator (40)
- 10 PROGRAM FUNCTION button and indicator (122)
- 11 REVERSE button (62)
- 12 SURROUND MODE button and indicator
- 3 SURROUND LEVEL button (54)
- EQ button and indicator (58)
- 15 PERSONAL FILE 1 5 button and indicator (64)
- 16 SELECT 5 button and indicator (56)
- 17 MEMORY button and indicator (64) 18 CURSOR CONTROL buttons
- (56, 58, 64, 66)
- 19 DISPLAY button (62)
- 20 Display window
- 21 HEADPHONES jack

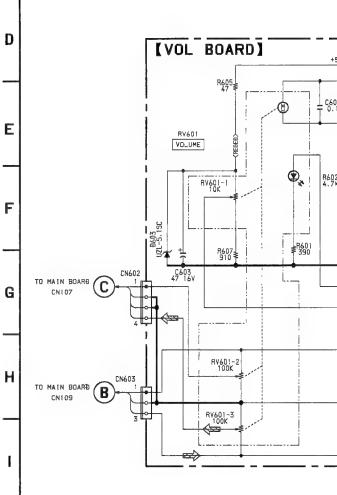
SECTION 2 DIAGRAMS

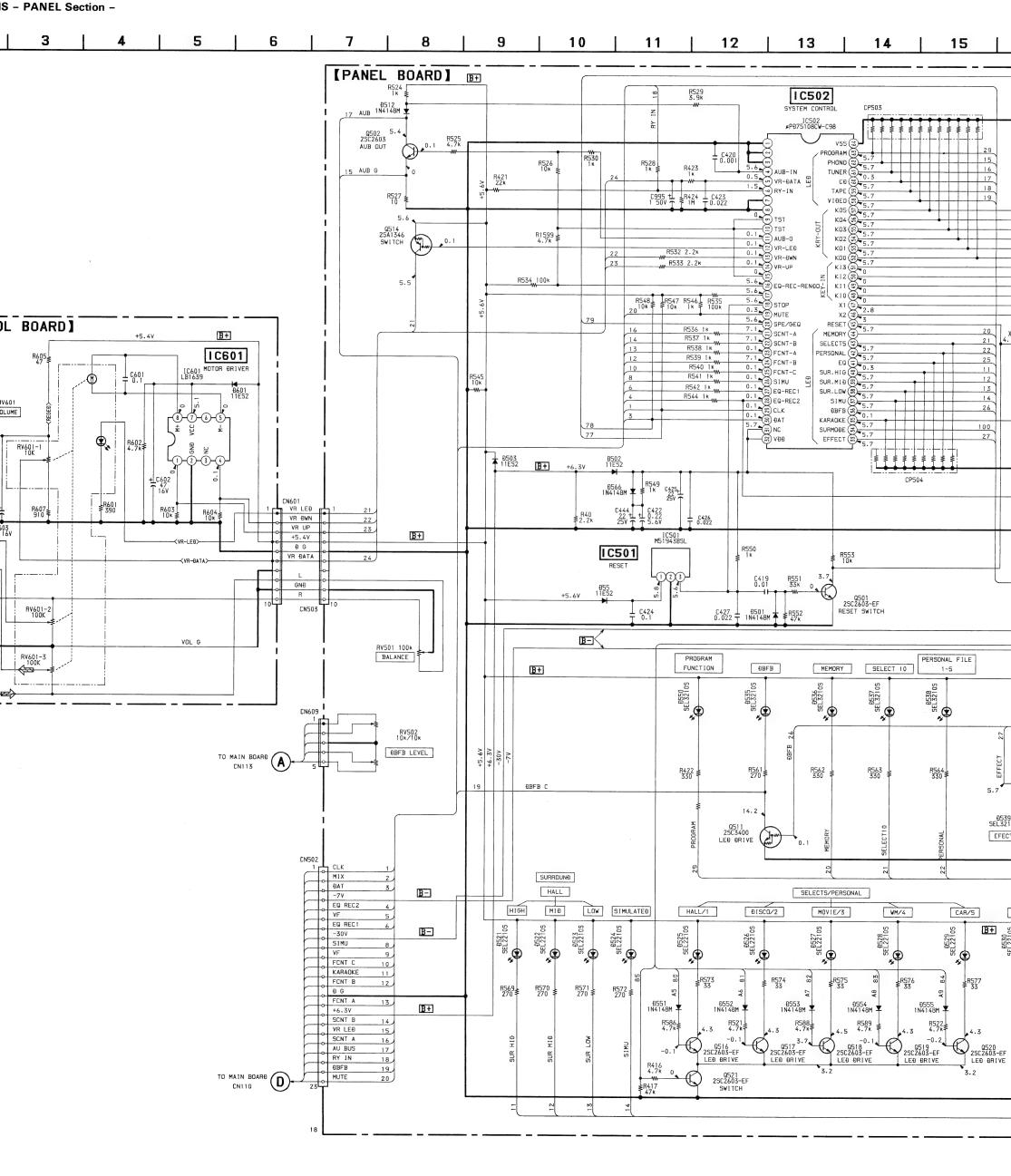
2-1. CIRCUIT BOARDS LOCATION

1 2 3 4 5

0 90000







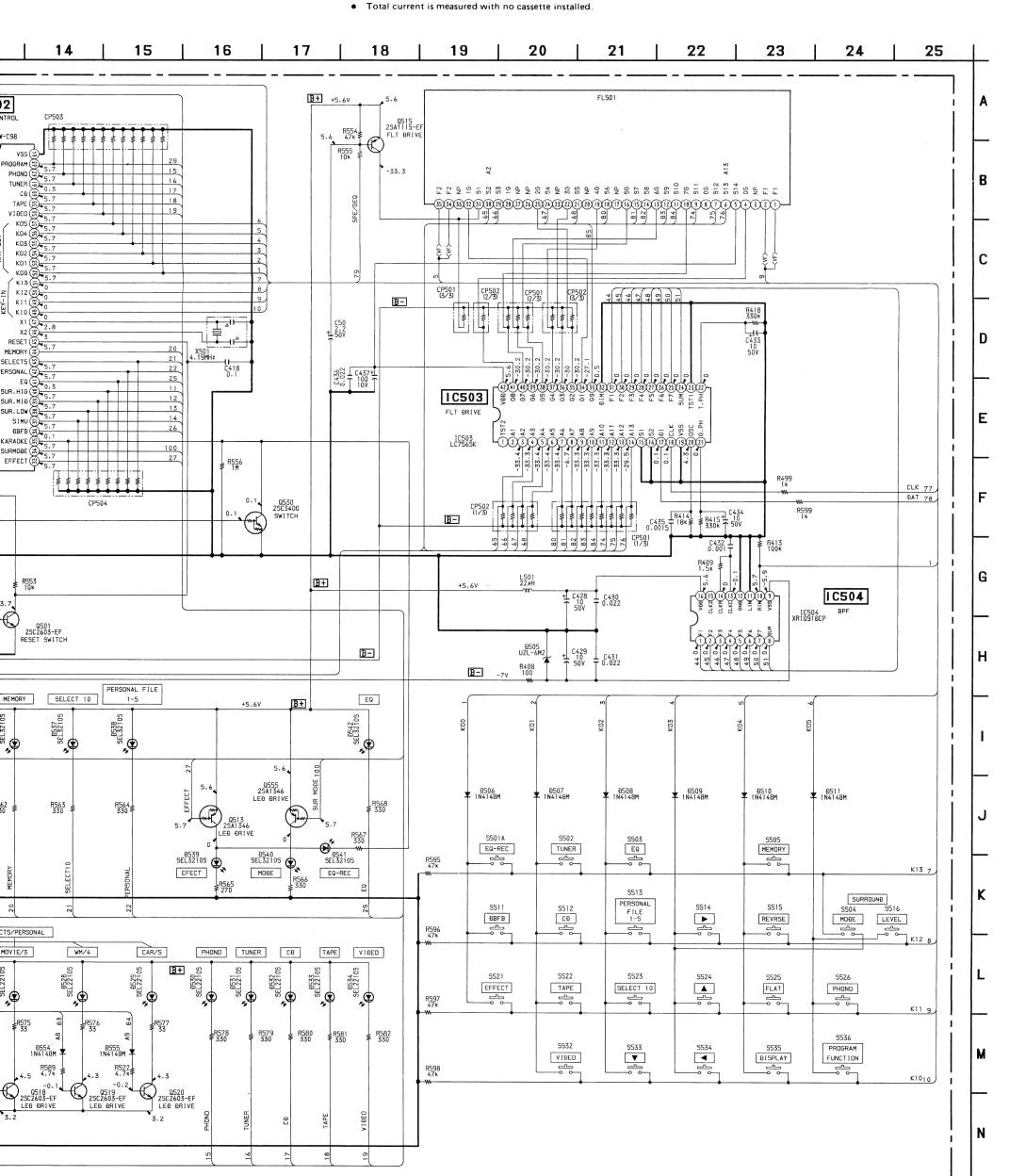
- All capacitors are in μF unless otherwise noted. pF: $\mu \mu F$ 50WV or less are not indicated except for electrolytics
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- : internal component.
- : nonflammable resistor. : fusible resistor.
- : printed resistor.
- B + : B+ Line : B- Line В -
- 🔲 : adjustment for repair.
- : selected to yield optimum performance.
- AC voltage readings in the bias oscillator with a VTVM.

supply from external power voltage jack.

Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions. Voltages are taken with a VOM (Input Impedance $10M\,\Omega$).

Power voltage is dc V and fed with regulated dc power

- Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
 - Signal path. : CD
 - G:Germany
 - IT: Italian
- EE: East European

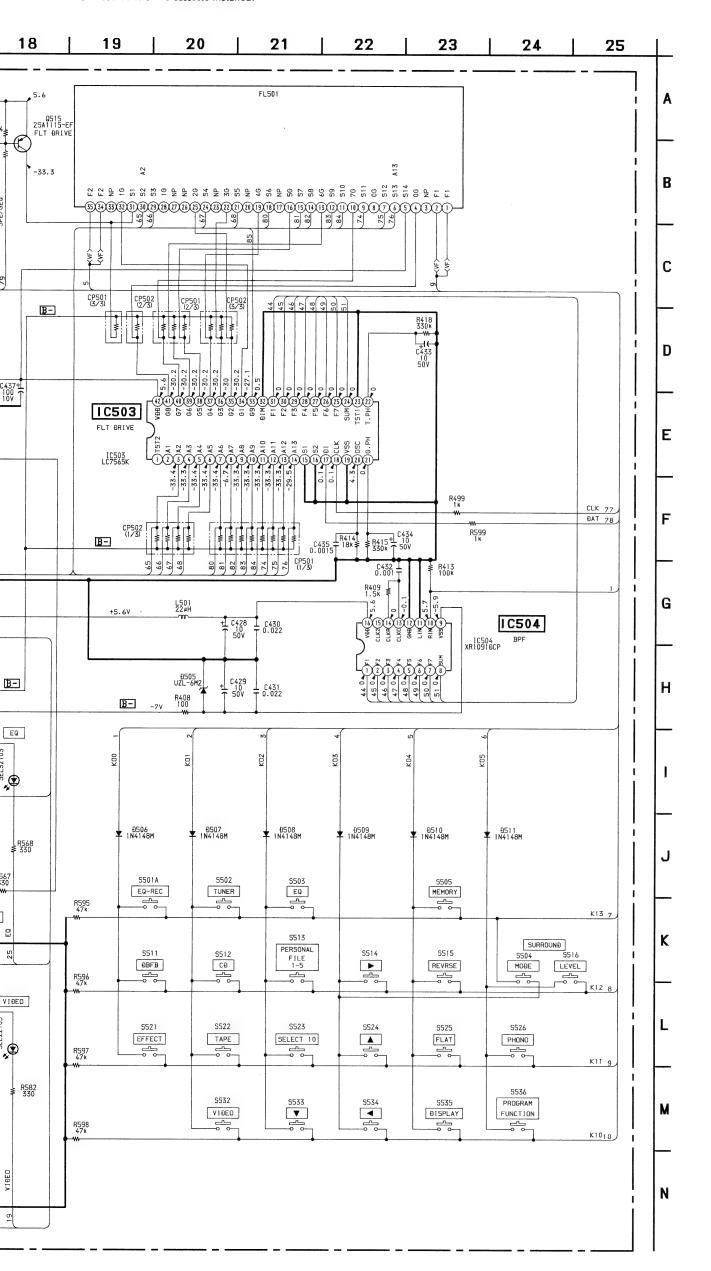


22105

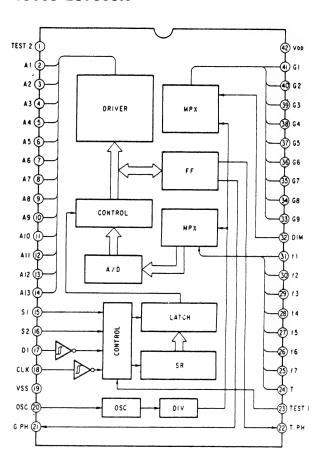
Vote:

- All capacitors are in μF unless otherwise noted. pF: $\mu \mu F$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/\!/_4\,W$ or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
 : printed resistor.
- B + : B+ Line
 - B— : B— Line
- : adjustment for repair.
- * : selected to yield optimum performance.
- AC voltage readings in the bias oscillator with a VTVM.
- Total current is measured with no cassette installed.

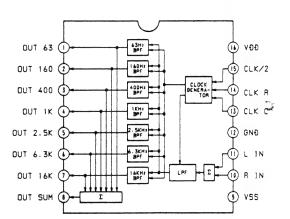
- Power voltage is dc V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input Impedance 10MΩ).
 Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- G:Germany
- IT: Italian
- EE: East European



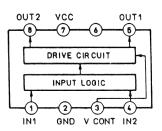
IC503 LC7565K

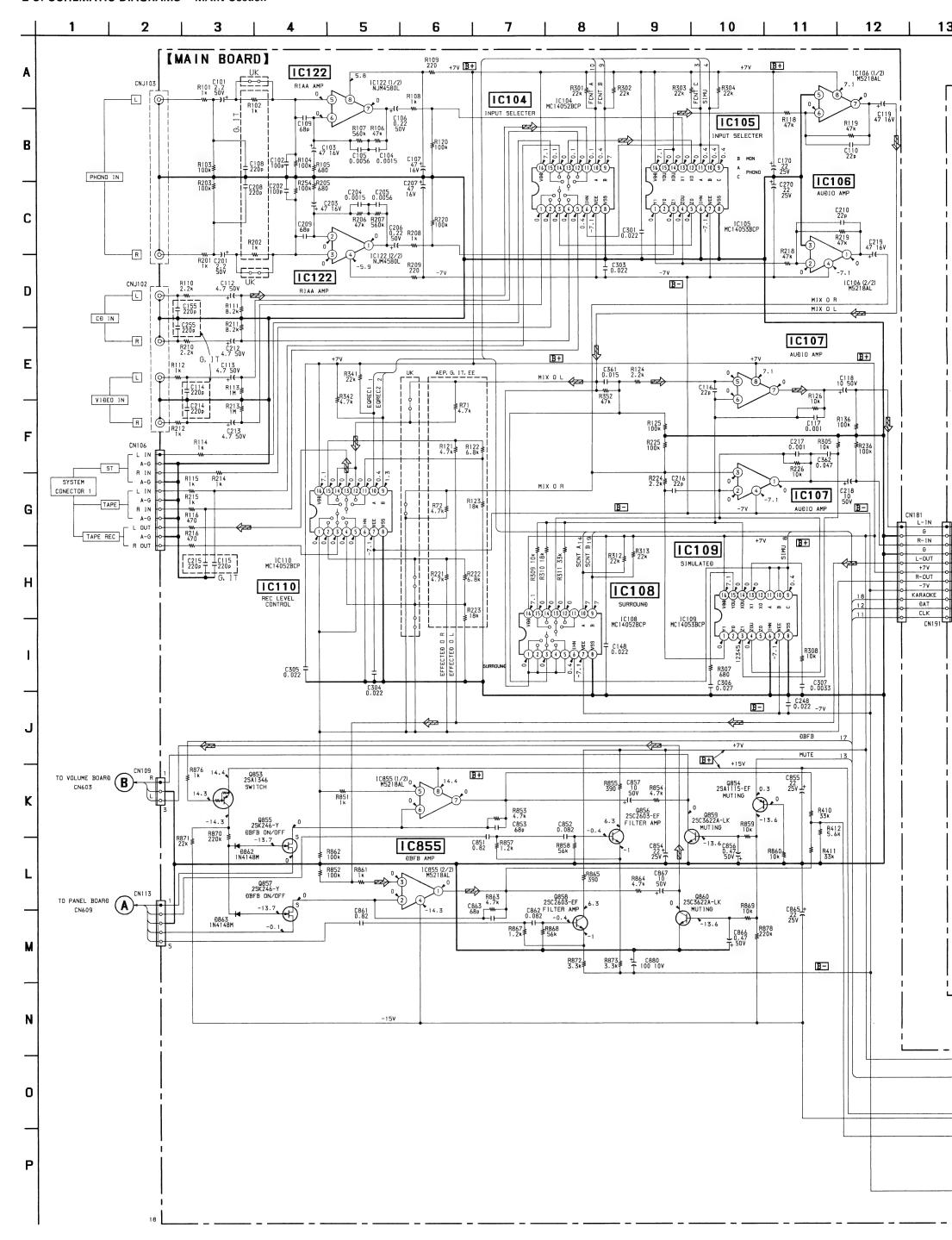


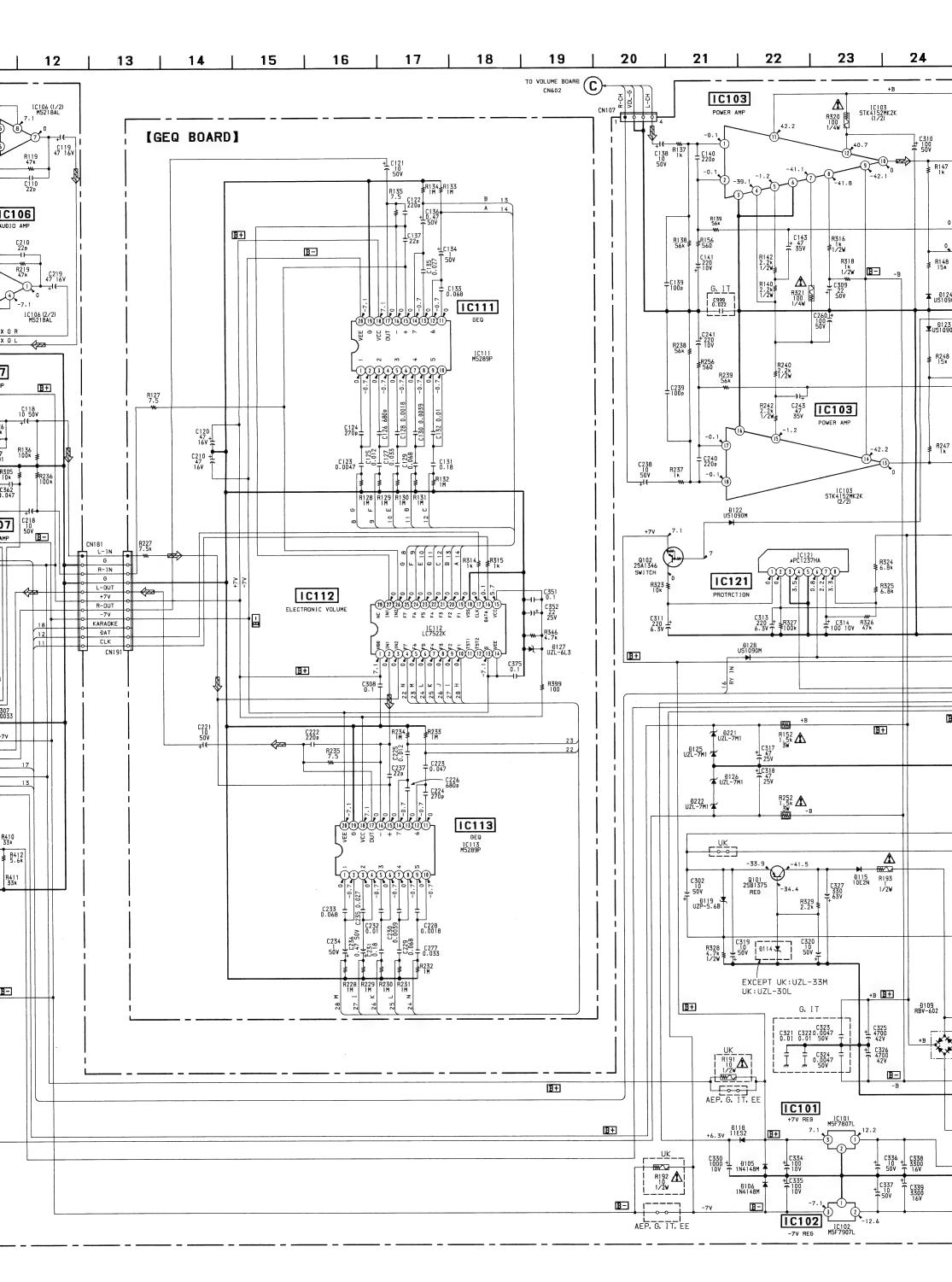
IC504 XR1091DCP

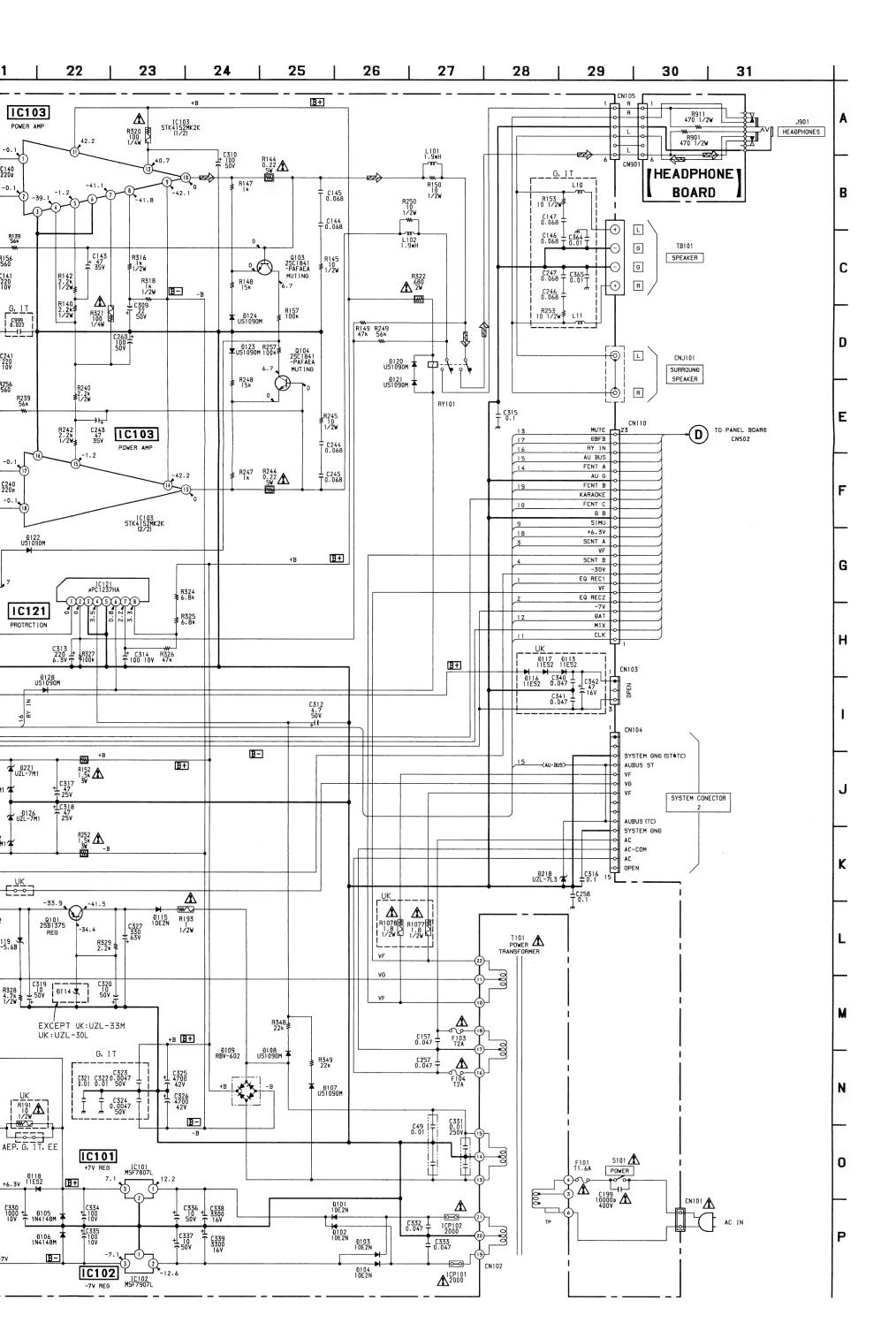


IC601 LB1639

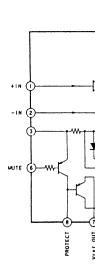




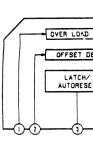




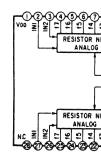
IC103 STK4



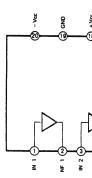
IC121 μPC12



IC112 LC75

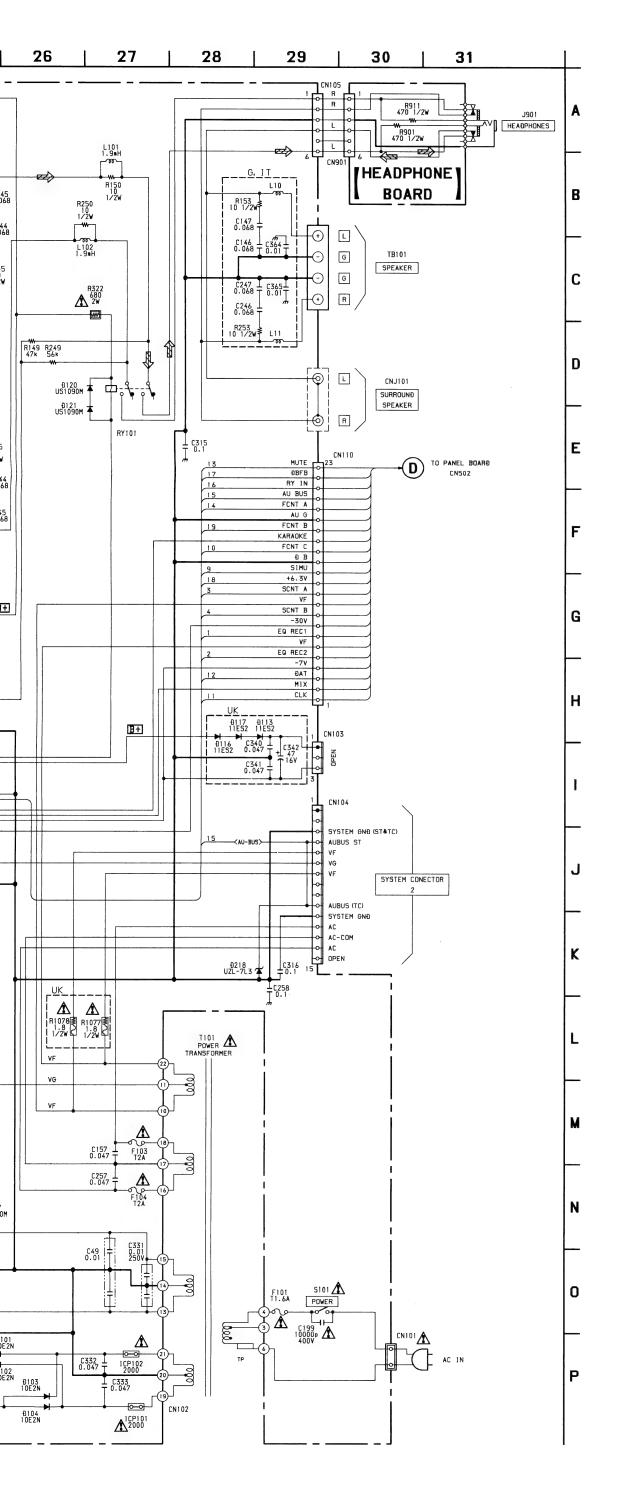


IC113 M528

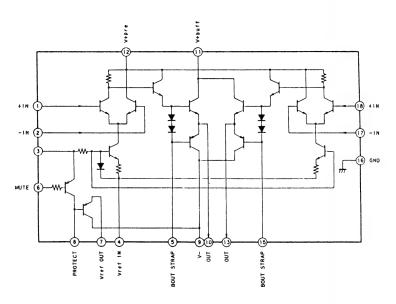


Note:

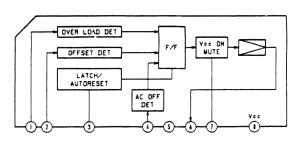
- All capacitors a 50WV or less and tantalums.
- All resistors ar specified.
- fusible
 printed
- B + : B + Line
- B : B Line
- * : selected AC voltage rea
- Total current is
- Power voltage is supply from ex
- Voltage and w under no-signal
- Voltages are tal Voltage variati
- tion tolerances
 Circled number
- Signal path.
 CD
- G:Germany
- IT:Italian



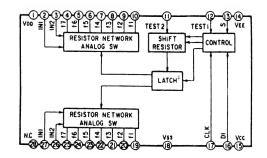
IC103 STK4152MK2K



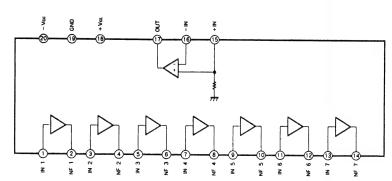
IC121 μPC1237HA



IC112 LC7522K



IC113 M5289P



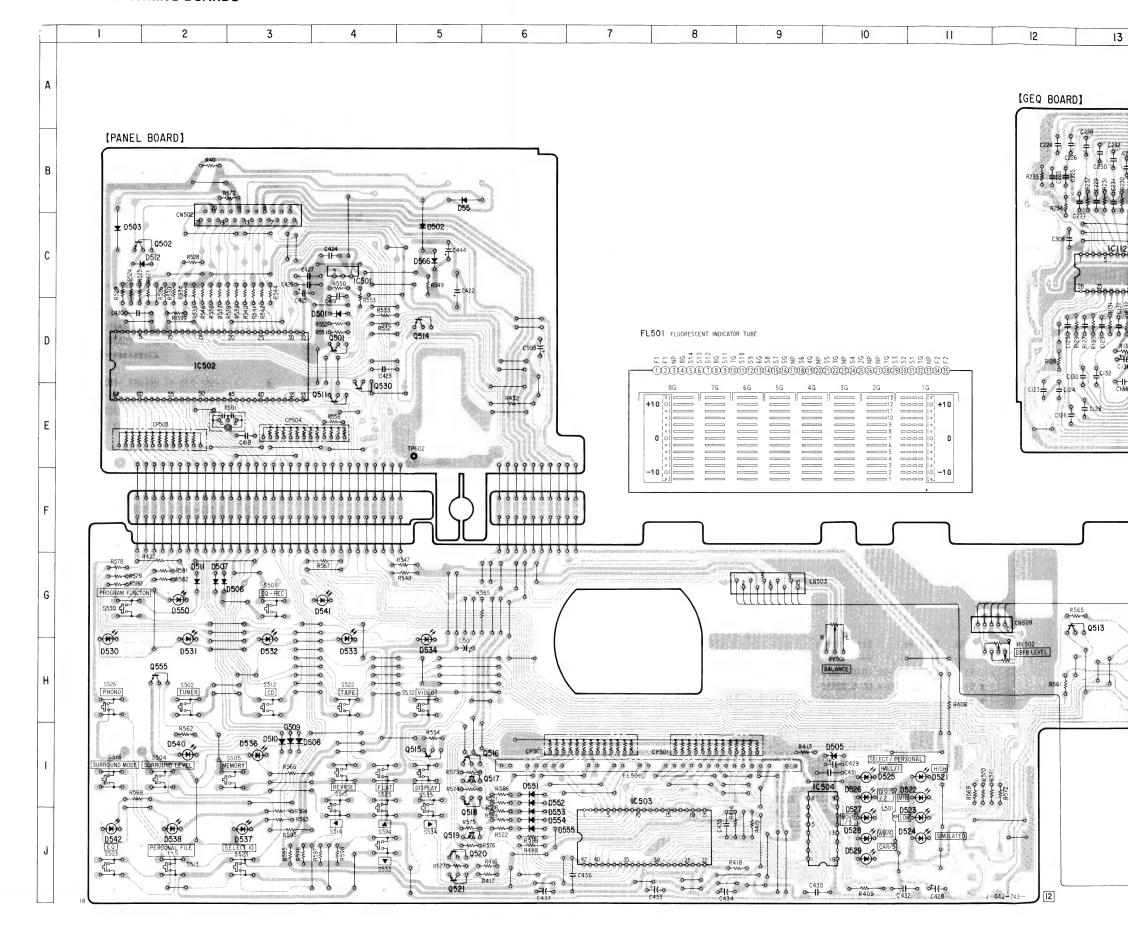
Note:

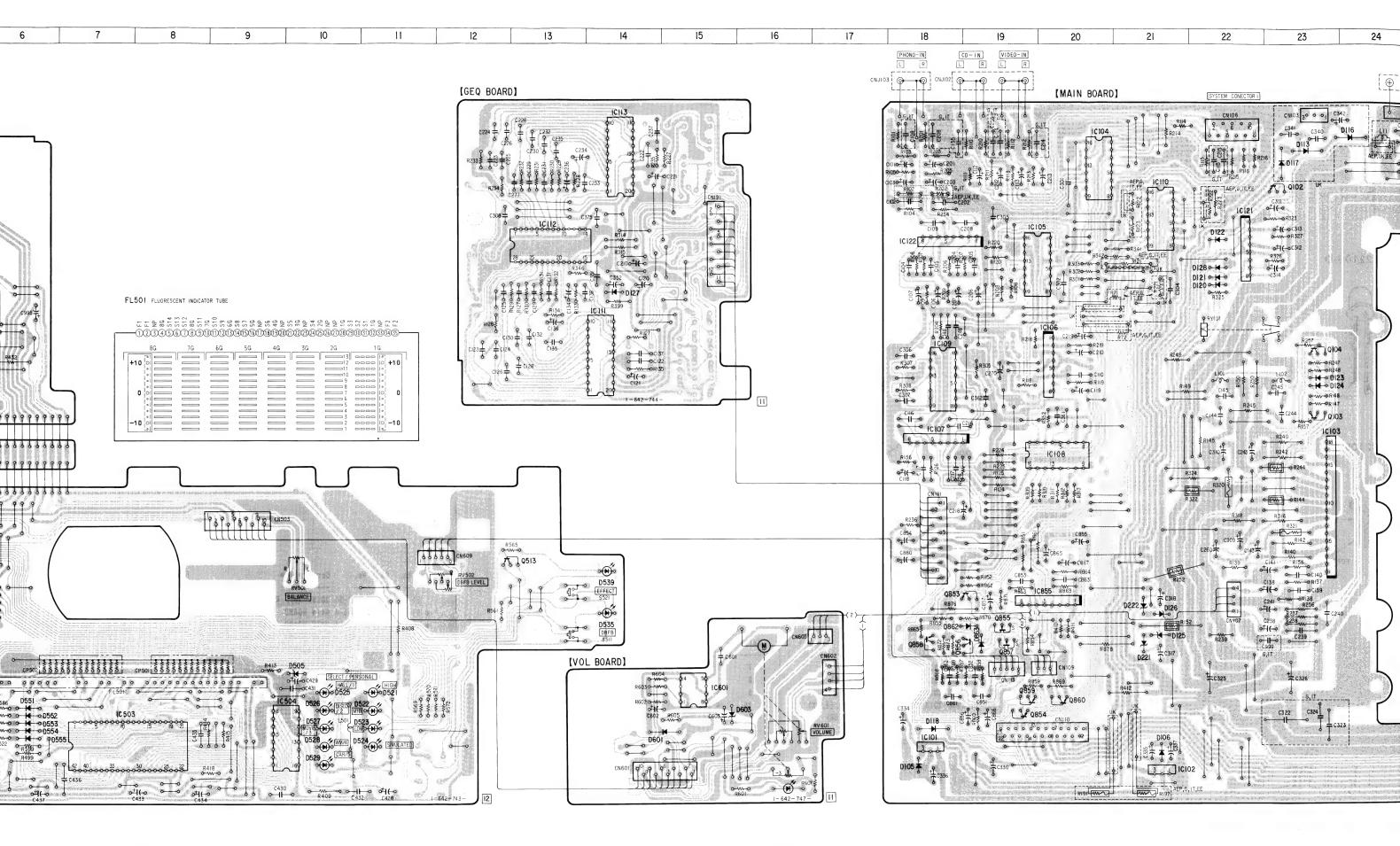
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^{1}\!/_{\!4}\,W$ or less unless otherwise specified.
- nonflammable resistor.
- : fusible resistor.
 : printed resistor.
- B + : B+ Line
- B − : B − Line
- : adjustment for repair. : selected to yield optimum performance.
- AC voltage readings in the bias oscillator with a VTVM.
- Total current is measured with no cassette installed.
- Power voltage is dc V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
 Voltages are taken with a VOM (Input Impedance 10M \(\Omega \)).
- Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 - **☞** : CD G:Germany
 - G. Germa
- IT:Italian
- EE: East European

• Semiconductor Location

		11	T	11	
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D55 D101 D102 D103 D104 D105 D106 D107 D108 D109 D113 D114 D115 D116 D117 D118 D119 D120 D121 D122 D123 D124 D125 D126 D127 D128 D221 D122 D501 D502 D503 D505 D506 D507 D508 D509 D511 D512 D521 D522 D523 D524 D525 D526 D527 D528 D529 D530 D531 D532 D533 D534 D535 D536	B-5 G-27 G-27 G-27 H-27 J-28 J-28 J-28 B-23 G-30 H-30 B-24 B-23 J-18 H-29 D-22 C-22 E-23 H-21 D-14 C-22 B-26 H-21 D-4 C-5 C-1 I-10 G-2 G-2 I-3 I-10 J	D537 D538 D539 D540 D541 D550 D551 D552 D553 D554 D555 D566 D601 D603 D862 D863 IC101 IC102 IC103 IC104 IC105 IC106 IC107 IC108 IC109 IC110 IC111 IC112 IC103 IC104 IC105 IC106 IC107 IC108 IC109 IC110 IC111 IC112 IC504 IC504 IC504 IC504 IC504 IC504 IC504 IC601 IC855 IC504 IC601 IC855 IC504 IC601 IC855 IC504 IC601 IC855 IC601 IC855 IC601 IC855 IC601 IC855 IC601 IC855 IC601 IC855 IC601 IC855 IC601 IC855 IC601 IC601 IC855 IC601 IC855 IC601 IC855 IC601 IC855 IC601 IC855 IC601 IC855 IC601 IC855 IC601 IC601 IC855 IC601 IC60	J-3 J-2 G-14 I-2 G-2 J-6 I-6 I-6 J-6 J-6 J-15 H-19 H-19 J-18 J-21 F-23 B-20 C-19 E-18 F-20 E-14 C-13 B-21 E-21 E-14 C-13 B-14 C-22 C-18 C-4 D-2 J-7 J-15 H-20 G-29 B-23 E-23 E-23 E-23 E-23 E-23 E-23 E-23 E-23 E-23 E-23 E-24 C-5 J-5 J-5 J-5 J-5 J-7 J-15 H-20 G-29 B-23 E-23 E-23 E-24 C-15 J-5 J-5 J-5 J-5 J-7 J-15 H-20 G-29 B-23 E-23 E-24 G-15 J-5 J-5 J-5 J-5 J-5 J-7 J-15 H-20 G-29 B-23 E-23 E-23 E-24 G-15 J-5 J-5 J-5 J-5 J-5 J-5 J-5 J-	Q853 Q854 Q855 Q856 Q857 Q858 Q859 Q860	H-19 I-19 H-18 H-19 H-18 I-19 I-19

2-4. PRINTED WIRING BOARDS



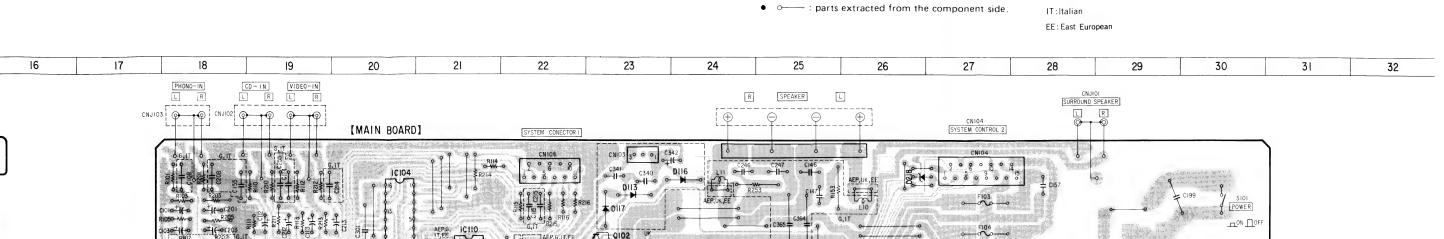


Note:

IT: Italian

TIOI POWER TRANSFOMER

R1077



o+1(-oC312

R257 0104

o-w-o R247 o-w-o R248 o-14 o D123 o-14 o D124

D128 ○ 14 · ○ DI21 0 14 0 DI20 0 14 0

9 0854

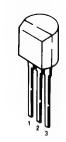
J901 HEAD PHONES

[H.P BOARD]

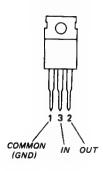
AC IN

2-5. SEMICONDUCTOR LEAD LAYOUT

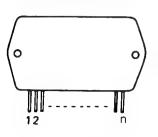
M51943BSL



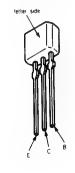
M5F7907



STK-4152MK2K



2SA1175-HFE



2SB1094-LK



2SC1841-PAFAEA



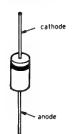
2SC2603-EF 2SC3622A-LK DTA-124ES DTC-124ES



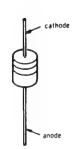
2SK246-Y



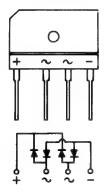
10E2N 1N4148M 1S1585



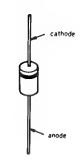
11ES2 HZL-7M1 HZS33-2L HZS6AIL



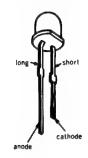
RBV-602-01



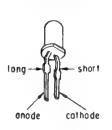
UZL-6L3 UZL-6M2 UZL-7L3 UZP-5.6B



SEL2210S-D



SEL3210S-CD



SECTION 3 EXPLODED VIE

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts Example:

KNOB, BALANCE(WHITE)...(RED)

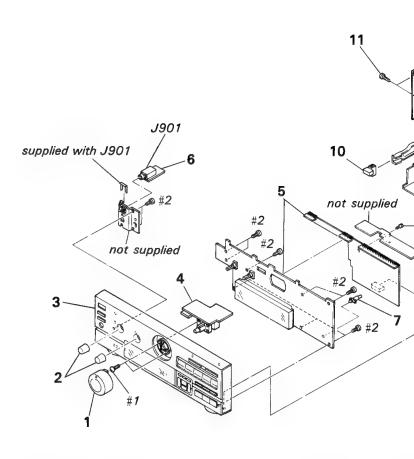
Parts color Cabinet's color

 items marked * " are not : since they are seldom requir routine service. Some delay anticipated when ordering th

 The mechanical parts with n number in the exploded view supplied.

 hardware (#mark) list is giver last of this parts list.

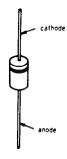
3-1. CABINET SECTION



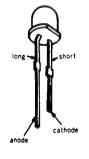
Ref. No.	Part No.	Description	Remark	Ref.
1	X-4942-417-1	KNOB ASSY, ROUND (IT)		* 7
1	X-4942-418-1	KNOB ASSY, ROUND (AEP, G, EE, UK)	8
2	4-950-651-01	KNOB (DIA. 16), ROUND (IT)		9
2	4-950-651-11	KNOB (DIA. 16), ROUND (AEP. G.	EE, UK)	11
3	X-4942-431-1	PANEL ASSY, FRONT (AEP, G, EE, U	K)	11
3	X-4942-433-1	PANEL ASSY, FRONT (IT)		1
* 4	1-642-747-11	VOL BOARD		* 1:
* 5	A-4347-275-A	PANEL BOARD, COMPLETE		* 13
* 6	1-642-746-11	H. P. BOARD		J:

SECTION 3 EXPLODED VIEWS

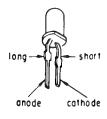
UZL-6L3 UZL-6M2 UZL-7L3 UZP-5.6B



SEL2210S-D



SEL3210S-CD



NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
 Example:

KNOB, BALANCE(WHITE)...(RED)

Parts color Cabinet's color

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- hardware (#mark) list is given in the last of this parts list.

The components identified by mark or dotted line with mark are critical for safety.

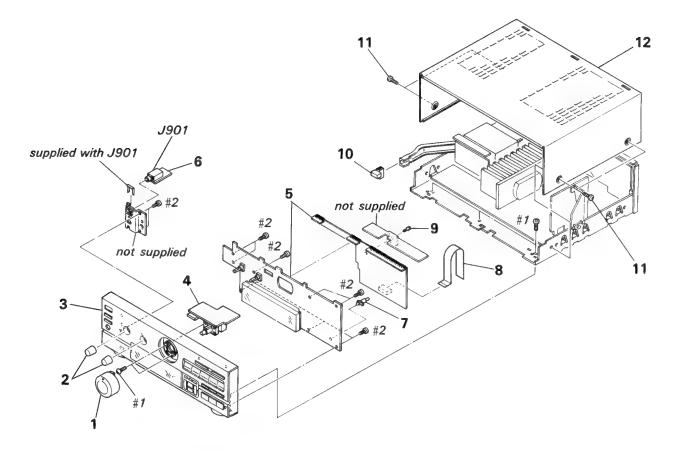
Replace only with part number specified.

G:Germany

IT: Italian

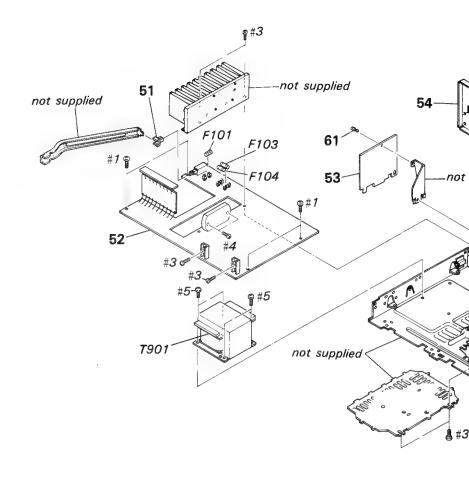
EE:East European

3-1. CABINET SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4942-417-1	KNOB ASSY, ROUND (IT)		* 7	4-924-098-31	HOLDER, PC BOARD	
1	X-4942-418-1	KNOB ASSY, ROUND (AEP, G, EE, UK)		8	1-690-697-11	WIRE (FLAT TYPE) (23 CORE)	
2	4-950-651-01	KNOB (DIA. 16), ROUND (IT)		9	4-812-134-11	RIVET NYLON, 3.5	
2	4-950-651-11	KNOB (DIA. 16), ROUND (AEP, G, E	E. UK)	10	4-942-061-01	BUTTON (P) (IT)	
3	X-4942-431-1	PANEL ASSY, FRONT (AEP, G, EE, UK)		10	4-942-061-11	BUTTON (P) (AEP, G, EE, UK)	
3	X-4942-433-1	PANEL ASSY, FRONT (IT)		11	3-363-099-01	SCREW (CASE +3X8 TP2)	
* 4	1-642-747-11	VOL BOARD		* 12	4-939-803-91	CASE (IT)	
* 5	A-4347-275-A	PANEL BOARD, COMPLETE		* 12	4-949-912-11	CASE (AEP, G, EE, UK)	
* 6	1-642-746-11	H. P. BOARD		J901	1-507-854-00	JACK, PHONE	

3-2. MAIN BOARD SECTION

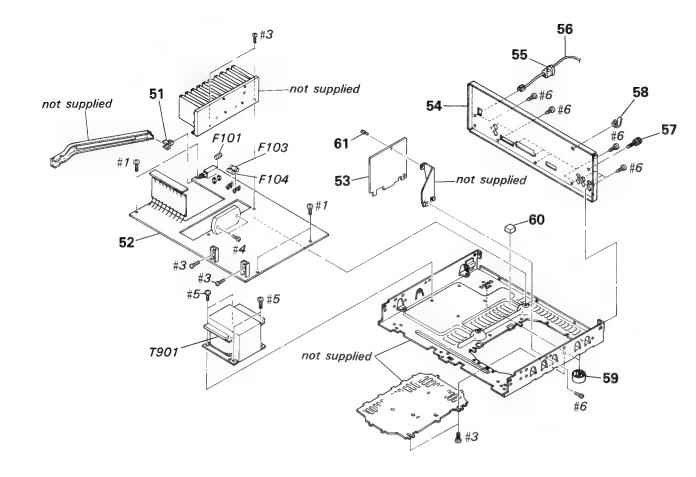


Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.
51	4-866-342-00	JOINT (B), KNOB		<u>∱</u> 56	1-575-669-2
* 52	A-4347-265-A	MAIN BOARD, COMPLETE (UK)		57	4-947-010-0
* 52	A-4347-266-A	MAIN BOARD, COMPLETE (AEP, EE)		* 58	4-949-235-0
* 52	A-4347-272-A	MAIN BOARD, COMPLETE (G. IT)		59	4-931-169-0
* 53	A-4347-276-A	GEQ BOARD, COMPLETE		* 60	4-932-867-0
* 54	4-950-662-11	PANEL (B3120). BACK (AEP, EE)		61	4-812-134-1
* 54	4-950-662-21	PANEL (B3120), BACK (UK)		<u></u> 1 1 1 1 1 1 1 1 1 1	1-532-259-1
* 54	4-950-662-41	PANEL (B3120), BACK (G)		<u></u> ∱ F103	1-532-203-0
* 54	4-950-662-51	PANEL (B3120), BACK (IT)		<u></u> ₹ F104	1-532-203-0
* 55	3-703-244-00	BUSHING (2104), CORD		<u></u> ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹	1-450-812-
<u> 1</u> 56	1-575-654-11	CORD, POWER (AEP, G, IT, EE)			

3-2. MAIN BOARD SECTION

ts identified by ed line with mark or safety. with part number

Remark



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-866-342-00	JOINT (B). KNOB		1 56	1-575-669-21	CORD. POWER (UK)	
* 52	A-4347-265-A	MAIN BOARD, COMPLETE (UK)		57		SCREW. FEEDER FIXED	
* 52	A-4347-266-A	MAIN BOARD, COMPLETE (AEP, EE)		* 58	4-949-235-01	HOOK	
* 52	A-4347-272-A	MAIN BOARD, COMPLETE (G, IT)		59	4-931-169-01	FOOT	
* 53	A-4347-276-A	GEQ BOARD, COMPLETE		* 60	4-932-867-01	CUSHION	
* 54	4-950-662-11	PANEL (B3120), BACK (AEP, EE)		61	4-812-134-11	RIVET NYLON, 3.5	
* 54	4-950-662-21	PANEL (B3120), BACK (UK)		Æ F101	1-532-259-00	FUSE (T1. 6A)	
* 54	4-950-662-41	PANEL (B3120), BACK (G)		№ F103	1-532-203-00	FUSE (T2. 0A)	
* 54	4-950-662-51	PANEL (B3120), BACK (IT)		№ F104	1-532-203-00	FUSE (T2. 0A)	
* 55	3-703-244-00	BUSHING (2104), CORD		1 T901	1-450-812-11	TRANSFORMER, POWER	
<u></u> ₹ 56	1-575-654-11	CORD, POWER (AEP. G. IT. EE)		_			

The components identified by mark A or dotted line with mark A are critical for safety.

Replace only with part number specified.

MAIN

SECTION 4 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- RESISTORS
 All resistors are in ohms
 METAL:Metal-film resistor
 METAL OXIDE:Metal Oxide-film resistor
 F:nonflammable
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
 In each case, u:μ, for example: uA...: μA..., uPA...: μPA..., uPB...: μPC...; μPC..., uPD...: μPD...: μPD...
- CAPACITORS
- uF: μF • COILS uH: μH

When indication parts by reference number, please include the board name.

The components identified by mark A or dotted line with mark A are critical for safety.

Replace only with part number specified.

- G:Germany
- IT · Italian
- EE: East European

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
*	A-4347-266-A	MAIN BOARD,	COMPLETE	(AEP, EE)		C144	1-136-163-00		0.068uF	5%	50V
*	A-4347-272-A	MAIN BOARD,	COMPLETE	(G. IT)							
*	A-4347-265-A	MAIN BOARD,	COMPLETE	(UK)		C145	1-136-163-00	FILM	0.068uF	5%	50V
		*******	******			C146	1-136-163-00	FILM	0.068uF	5%	50V (G, IT
						C147	1-136-163-00	FILM	0.068uF	5%	50V (G, IT
*	1-533-213-31	HOLDER, FUS	E			C148	1-161-494-00	CERAMIC	0. 022uF		25V
*	3-309-144-21	HEAT SINK				C155	1-162-286-31	CERAMIC	220PF	10%	50V (G, IT
*	4-942-204-01	PLATE, GROUI	ND								
	7-682-548-04	SCREW +BVTT	3X8 (S)			C157	1-136-161-00	FILM	0.047uF	5%	50 V
						C170	1-126-049-11	ELECT	22 u F	20%	2 5 V
		< CAPACITOR	>			 €C199	1-161-744-00	CERAMIC	0.01uF		400V
						C201	1-126-161-11	ELECT	2. 2uF	20%	50 V
C49	1-102-394-11	CERAMIC	0.01uF		250V	C202	1-162-282-31	CERAMIC	100PF	10%	50V
C101	1-126-161-11	ELECT	2. 2uF	20%	50V						
C102	1-162-282-31	CERAMIC	100PF	10%	50V	C203	1-126-022-11	ELECT	47uF	20%	16V
C103	1-126-022-11	ELECT	47uF	20%	16V	C204	1-106-347-00	MYLAR	1500PF	5%	200V
C104	1-106-347-00	MYLAR	1500PF	5%	200V	C205	1-130-480-00	MYLAR	0.0056uF	5%	50V
						C206	1-124-464-11	ELECT	0. 22uF	20%	50V
C105	1-130-480-00	MYLAR	0. 0056uF	5%	50V	C207	1-126-022-11	ELECT	47 u F	20%	16V
C106	1-124-464-11	ELECT	0. 22uF	20%	50V						
C107	1-126-022-11	ELECT	47uF	20%	16V	C208	1-162-286-31	CERAMIC	220PF	10%	50V (G, IT
C108	1-162-286-31	CERAMIC	220PF	10%	50V (G, IT)	C209	1-162-219-31	CERAMIC	68PF	5%	50V
C109	1-162-219-31	CERAMIC	68PF	5%	50V	C210	1-162-207-31	CERAMIC	22PF	5%	50V
						C212	1-126-163-11	ELECT	4. 7uF	20%	50V
C110	1-162-207-31	CERAMIC	22PF	5%	50V	C213	1-126-163-11	ELECT	4. 7uF	20%	50V
C112	1-126-163-11	ELECT	4. 7uF	20%	50V						
C113	1-126-163-11	ELECT	4. 7uF	20%	50V	C214	1-162-286-31	CERAMIC	220PF	10%	50V (G, 1T
C114	1-162-286-31	CERAMIC	220PF	10%	50V (G, IT)	C215	1-162-286-31	CERAMIC	220PF	10%	50V (G, 11
C115	1-162-286-31	CERAMIC	220PF	10%	50V (G, IT)	C216	1-162-219-31	CERAMIC	68PF	5%	50 V
						C217	1-162-294-31	CERAMIC	0.001uF	10%	50V
C116	1-162-219-31	CERAMIC	68PF	5%	50V	C218	1-126-059-11	ELECT	10 u F	20%	50V
C117	1-162-294-31	CERAMIC	0.001uF	10%	50V						
C118	1-126-059-11	ELECT	10uF	20%	50V	C219	1-126-022-11	ELECT	47uF	20%	16V
C119	1-126-022-11	ELECT	47uF	20%	16V	C238	1-126-059-11	ELECT	10uF	20%	50V
C138	1-126-059-11	ELECT	10uF	20%	50V	C239	1-162-282-31	CERAMIC	100PF	10%	50V
						C240	1-162-286-31	CERAMIC	220PF	10%	50V
C139	1-162-282-31	CERAMIC	100PF	10%	50V	C241	1-126-101-11	ELECT	100uF	20%	16V
C140	1-162-286-31		220PF	10%	50V						
C141	1-126-101-11		100uF	20%	16V	C243	1-124-910-11	ELECT	47uF	20%	50V
C143	1-124-910-11		47uF	20%	50V	C244	1-136-163-00		0.068uF	5%	50 V

MAIN

Ref. No.	Part No.					ark			Part No.	Descri	ption				nark
C245	1-136-163-00	FILM	0. 068uF	5%	50V		C36		1-136-155-00	FILM		0. 015uF	5%	507	
C246	1-136-163-00		0. 068uF	5%		(G, IT)	C36		1-136-161-00	FFLM		0.047uF	5%	50V	
C247	1-136-163-00		0. 068uF	5%		(G, IT)	C36		1-161-379-00		C	0.01uF	30%	25V	(G, IT)
0241	1-130-100 00	1104	V, VVV41	***	•••	()	C36		1-161-379-00			0.01uF	30%	25V	(G. IT)
C248	1-161-494-00	CERAMIC	0. 022uF		25V		C85		1-136-176-00			0. 82uF	5%	50 V	
C255	1-161-286-31		220PF	10%		(G, 1T)		•							
C255	1-136-161-00		0. 047uF	5%	50V	(0,,	·C85	2	1-136-164-00	FILM		0. 082uF	5%	50V	
	1-150-151-00		0. 1uF	V/4	50V	1	C85		1-162-219-31			68PF	5%	50V	
C258			100uF	20%	50V		C85		1-126-049-11			22uF	20%	25V	
C260	1-124-122-11	ELECT	10001	2074	001	1	C85		1-126-049-11			22uF	20%	25V	
0070	1 100 040 11	ELECT	22uF	20%	25V		C85		1-126-300-11			0. 47uF	20%	50V	
C270	1-126-049-11 1-161-494-00		0. 022uF	2070	25V		000	•	1 120 000 11					***	
C301			10uF	20%	50V		C85	7	1-126-059-11	FLECT		10uF	20%	50 V	
C302	1-126-059-11		0. 022uF	2070	25V		C86		1-136-176-00			0. 82uF	5%	50V	
C303	1-161-494-00		0. 022uF		25V		C86		1-136-164-00			0. 082uF	5%	50V	
C304	1-161-494-00	CERAMIC	U. UZZUF		234		C86		1-162-219-31		c	68PF	5%	50V	
	4 404 404 00	0.004441.0	0. 022uF		25V	-	C86		1-126-049-11		•	22uf	20%	25V	
C305	1-161-494-00			EB/	50V		000	10	1-120-043-11	LLLUI		2201	2070	201	
C306	1-136-158-00		0. 027uF	5%	50V		C86	9.5	1-126-300-11	FLECT		0. 47uF	20%	50V	
C307	1-130-477-00		0. 0033uF		50V		C86		1-126-059-11			10uF	20%	50V	
C309	1-126-233-11		22uF	20%					1-124-994-11			100uF	20%	107	
C310	1-124-122-11	ELECT	100uF	20%	50V		C88		1-161-494-00			0. 022MF	2070		(G, IT)
		FLEAT	0005	0.08/	6 21	. 1	033	, ,	1-101-434-00	CLIVAMI	v	0. 02 Z WH		201	(0, 11)
C311	1-124-587-11		220uF	20%	6. 3V					< CONN	ECTAD				
C312	1-126-163-11		4. 7uF	20%	50V					COMM	LUIUN	,			
C313	1-124-587-11		220uF	20%	6. 3V		a 0111	101	1 564 201 00	DIN O	ONNECT	AD 2D			
C314	1-124-994-11		100uF	20%	10V				1-564-321-00				DITCU)	20	
C315	1-164-159-11	CERAMIC	0. 1uF		50V				1-535-139-00 1-564-358-00			•	riion)	2 F	(UK)
					FAV				1-566-859-11						(UK)
C316	1-164-159-11		0. 1uF	0.004	50V										
C317	1-124-910-11		47uF	20%	50V		# UN	100	1-564-509-11	rLuu.	COMMEC	ION OF			
C318	1-124-910-11		47uF	20%	50V		+ 011	100	1 500 050 41	COCKET	CONN	EATAR 118			
C319	1-126-059-11		10uF	20%	50V				1-566-858-41						
C320	1-126-059-11	ELECT	10uF	20%	50V				1-564-507-11						
			0 04145	0.04/	0.514	(0 17)			1-564-337-00						
C321	1-161-379-00		0. 01MF	30%		(G, IT)			1-568-839-11 1-564-339-00						
C322	1-161-379-00		0. 01MF	30%		(G, IT)	# UN	110	1-504-339-00	rin, v	ONNEC	UN DE			
C323	1-161-377-00		0.0047MF	20%		(G, IT)	4 OH:	101	1-573-978-11	CONNEC	TAD D	OADD TO D	NAPD 11	D	
C324	1-161-377-00		0.0047MF	20%		(G, IT)			1-565-352-41				וו טאאט	F	
C325	1-126-224-11	I ELECT	4700uF	20%	42V				1-565-258-11						
		FLEAT	4700F	0.08/	401/				1-565-352-11						
C326	1-126-224-11		4700uF	20%	42V		UR.	3103	1-303-332-11	JACK,	TIN ZI				
C327	1-124-920-11		330uF	20%	63V					< D10I)F \				
C330	1-124-473-11		1000uF	20%	107	,				\ DIOL	,L /				
C331	1-102-394-11		0. 01uF	E0/	250V	' l	D1	۵1	8-719-200-77	DIODE	10E2	N			
C332	1-136-161-00) FILM	0. 047uF	5%	50V		D1:		8-719-200-77		10 8 2				
		N FILM	0.0475	EM	EAV		D1		8-719-200-77		10E2				
C333	1-136-161-00		0. 047uF	5%	50V				8-719-200-77		10E2				
C334	1-124-994-1		100uF	20%	107		D1				1N41				
C335	1-124-994-1		100uF	20%	100	.	D1	0.0	8-719-987-63	DIVUL	1144	140191			
C336	1-126-059-1		10uF .	20%	50V		D1	ሰፍ	8-719-987-63	חוחוב	1N41	1 A R M			
C337	1-126-059-1	I CLEUI	10uF	20%	50V				8-719-815-85		1815				
2225	4 404 993 0	n FLEAT	22005	2.08/	16V		D1 D1		8-719-815-85		1815				
C338	1-124-887-00		3300uF	20%			וע D1		8-719-813-83			-602-01			
C339	1-124-887-0		3300uF	20%	16V										
C340	1-136-161-0		3300uF	5% Ew		(UK)	D1		8-719-200-82			S2 (UK)			
C341	1-136-161-0		3300uF	5% 5W		(UK)	D1		8-719-934-21			30-1L (UK)	וווי)		
C342	1-126-022-1	1 FILM	3300uF	5%	507	(UK)	D1		8-719-002-66			33-2L (EXC	cri UK)		
						1	D1	13	8-719-200-77	DIOUE	10£2	ž N			

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description			Remark
D116	8-719-200-82	DIODE 11ES2 (UK)				< TRANSISTOR	>		
D117	8-719-200-82	DIODE 11ES2 (UK)							
D118	8-719-200-82	DIODE 11ES2		0101	8-729-141-83	TRANSISTOR	2\$B1094-	LK	
				Q102	8-729-900-63	TRANSISTOR	DTA124ES		
D119	8-719-014-66	DIODE UZP-5. 6B		Q103	8-729-140-84	TRANSISTOR	2SC1841-	PAFAEA	
D120	8-719-815-85	DIODE 181585		Q104	8-729-140-84	TRANSISTOR	2SC1841-	PAFAEA	
D121	8-719-815-85	DIODE 181585		Q853	8-729-900-63	TRANSISTOR	DTA124ES		
D122	8-719-815-85	DIODE 181585							
D123	8-719-815-85	DIODE 181585		0854	8-729-119-76	TRANSISTOR	2SA1175-	HFE	
				Q855	8-729-224-61	TRANSISTOR	2SK246-Y		
D124	8-719-815-85	DIODE 181585		Q856	8-729-620-05	TRANSISTOR	2SC2603-	EF	
D125	8-719-000-84	DIODE UZL-7M1		Q857	8-729-224-61	TRANSISTOR	2SK246-Y		
D126	8-719-000-84	DIODE UZL-7M1		Q858	8-729-620-05	TRANSISTOR	2SC2603-	EF	
D128	8-719-815-85	DIODE 181585							
D218	8-719-000-81	DIODE UZL-7L3	,	0859	8-729-141-26	TRANSISTOR	2SC3622A	-LK	
				0860	8-729-141-26	TRANSISTOR	2SC3622A-	-LK	
D221	8-719-000-84	DIODE UZL-7M1							
D222	8-719-000-84	DIODE UZL-7M1				< RESISTOR >			
D862	8-719-987-63	DIODE 1N4148M							
D863	8-719-987-63	DIODE 1N4148M		R71	1-249-425-11	CARBON	4. 7K 59	6 1/4W (AE	P, G, 1T, EE)
		•		R72	1-249-425-11	CARBON			P. G. IT, EE)
		< FUSE >		R101	1-249-417-11	CARBON	1K 59		
				R102	1-249-417-11	CARBON	1K 59		
♠ F101	1-532-259-00	FUSE (T1. 6A)		R103	1-249-441-11		100K 59		(*) ,
	1-532-203-00							,	
	1-532-203-00			R104	1-249-441-11	CARBON	100K 59	6 1/4W	
				R105	1-249-415-11		680 59		
				R106	1-249-437-11		47K 59		
		< 10 >		R107	1-247-897-11		560K 59		
				R108	1-249-417-11	CARBON	1K 59		
10101	8-759-604-86	IC M5F7807L							
IC102	8-759-604-90	IC M5F7907L		R109	1-249-409-11	CARBON	220 59	6 1/4W	
IC103	8-749-920-09	IC STK-4152MK2K		R110	1-249-421-11		2. 2K 59		
IC104	8-759-000-48	IC MC14052BCP		R111	1-249-428-11		8. 2K 55		
10105	8-759-140-53	IC MC14053BC		R112	1-249-417-11	CARBON	1K 59	-	
				R113	1-247-903-00	CARBON	1M 59		
IC106	8-759-634-50	IC M5218AL							
IC107	8-759-634-50	IC M5218AL		R114	1-249-417-11	CARBON	1K 59	6 1/4W	
IC108	8-759-000-48	IC MC14052BCP		R115	1-249-417-11	CARBON	1K 59	6 1/4W	
C109	8-759-140-53	IC MC14053BCP		R116	1-249-413-11	CARBON	470 59	6 1/4W	
10110	8-759-000-48	IC MC14052BCP		R118	1-249-437-11	CARBON	47K 59		
				R119	1-249-437-11	CARBON	47K 59	-	
IC121	8-759-111-68	IC uPC1237HA							
10122	8-759-710-73	IC NJM4580L		R120	1-249-441-11	CARBON	100K 59	1/4W	
10855	8-759-634-50	IC M5218AL		R121	1-249-425-11	CARBON	4. 7K 59	6 1/4W (AEF	, G, IT, EE)
				R122	1-249-427-11	CARBON	6.8K 59	1/4W (AEF	G. IT, EE)
		< LINK, IC >		R123	1-249-432-11	CARBON			, G, IT, EE)
				R124	1-249-421-11	CARBON	2. 2K 5%	1/4W	
	1-532-842-11	LINK, IC							
⚠1CP102	1-532-842-11	LINK, IC		R125	1-249-441-11	CARBON	100K 5%	1/4W	
				R126	1-249-429-11	CARBON	10K 5%	1/4W	
		< COIL >		R136	1-249-441-11	CARBON	100K 5%		
				R137	1-249-417-11		1 K 5%	1/4W	
* L10	1-420-872-00	COIL, AIR CORE 1.9uH	(G, IT)	R138	1-249-438-11	CARBON	56K 5%	1/4W	
* L11	1-420-872-00	COIL, AIR CORE 1.9uH	(G, IT)						
* L101	1-420-872-00	COIL, AIR CORE 1. 9uH		R139	1-249-438-11	CARBON	56K 5%	1/4W	
* L102	1-420-872-00	COIL, AIR CORE 1. 9uH		R140	1-247-756-11	CARBON	2. 2K 5%		
				R142	1-247-756-11	CARBON	2. 2K 5%		

The components identified by mark or dotted line with mark are critical for safety.

Replace only with part number specified.

MAIN

Ref. No.	Part No.	Description	1			Remark	Ref. No.	Part No.	Description				Remark
<u>^</u> R144	1-217-156-00	RES. METAL	- PLATE 0.	22	5W	F	R250	1-247-727-11	CARBON	10	5%	1/2W	
R145	1-247-727-11		10	5%	1/2W		<u></u> R252	1-215-918-00	METAL OXIDE	1. 5K	5%	3W	F
		•					R253	1-247-727-11	CARBON	10	5%	1/2W	(G, IT)
R147	1-249-417-11	CARRON	1 K	5%	1/4W		R254	1-249-441-11		100K		1/4W	(0),
R148	1-249-431-11		15K	5%	1/4W		11204	1 240 441 11	Onnoon	1001	074	17 411	
			47K	5%	1/4W		R256	1-249-414-11	CADDON	560	5%	1/4W	
R149	1-249-437-11				-		1	1-249-441-11				1/4W	
R150	1-247-727-11		10	5%	1/2W		R257			100K	5%		
<u>^</u> R152	1-215-918-00	METAL OXIDE	1.5K	5%	3W	F	R301	1-249-433-11		22K	5%	1/4W	
						(a . =1	R302	1-249-433-11		22K	5%	1/4W	
R153	1-247-727-11		10	5%		(G, IT)	R303	1-249-433-11	CARBON	22K	5%	1/4W	
R156	1-249-414-11	CARBON	560	5%	1/4W								
R157	1-249-441-11	CARBON	100K	5%	1/4W		R304	1-249-433-11		22 K	5%	1/4W	
R191	1-212-958-00	FUSIBLE	10	5%	1/2W	F (UK)	R305	1-249-429-11	CARBON	10K	5%	1/4W	
R192	1-212-958-00	FUSIBLE	10	5%	1/2W	F (UK)	R307	1-249-415-11	CARBON	680	5%	1/4₩	
							R308	1-249-429-11	CARBON	10K	5%	1/4W	
 ₹ R 193	1-212-934-00	FUSIBLE	1	5%	1/2W	F	R309	1-249-429-11	CARBON	10K	5%	1/4W	
R201	1-249-417-11	CARBON	1 K	5%	1/4W								
R202	1-249-417-11		1 K	5%	1/4W	(G, IT)	R310	1-249-432-11	CARBON	18K	5%	1/4W	
R203	1-249-441-11		100K	5%	1/4W	• • •	R311	1-249-435-11		33K	5%	1/4W	
R205	1-249-415-11		680	5%			R312	1-249-433-11		22K	5%	1/4W	
11200	1 240 470 11	OMITO II	• • • • • • • • • • • • • • • • • • • •	***	,,		R313	1-249-433-11		22K	5%	1/4W	
R206	1-249-437-11	CAPRON	47K	5%	1/4W		R316	1-247-752-11		1 K	5%	1/2W	
			560K	5%	1/4W		1010	1 241 102 11	ONIDON	110	070	1/ 211	
R207	1-247-897-11			5%			0210	1 047 750 11	CARROW	1 1/	Ea/	1 /04	
R208	1-249-417-11		1 K		1/4W		R318	1-247-752-11		1 K	5%	1/2₩	
R209	1-249-409-11		220	5%	1/4W		<u>^</u> R320	1-212-881-11		100	5%	1/4W	
R210	1-249-421-11	CARBON	2. 2K	5%	1/4W		<u> </u>	1-212-881-11		100	5%	1/4W	
							<u> </u>	1-215-891-11		680	5%	2W	F
R211	1-249-428-11		8. 2K		1/4W		R323	1-249-429-11	CARBON	10K	5%	1/4W	
R212	1-249-417-11	CARBON	1 K	5%	1/4W								
R213	1-247-903-00	CARBON	1M	5%	1/4W		R324	1-249-427-11		6. 8K	5%	1/4W	
R214	1-249-417-11	CARBON	1K	5%	1/4W		R325	1-249-427-11	CARBON	6. 8K	5%	1/4W	
R215	1-249-417-11	CARBON	1 K	5%	1/4W		R326	1-249-437-11	CARBON	47K	5%	1/4W	
							R327	1-249-441-11	CARBON	100K	5%	1/4W	
R216	1-249-413-11	CARBON	470	5%	1/4W		R328	1-247-760-11	CARBON	4. 7K	5%	1/2W	
R218	1-249-437-11	CARBON	47K	5%	1/4W								
R219	1-249-437-11	CARBON	47K	5%	1/4W		R329	1-249-421-11	CARBON	2. 2K	5%	1/4W	
R220	1-249-441-11		100K	5%	1/4W		R341	1-249-433-11	CARBON	22K	5%	1/4W	
R221	1-249-425-11	CARBON	4. 7K	5%	1/4W (AEI	P. G. IT. E	E) R342	1-249-425-11	CARBON	4. 7K	5%	1/4W	
							R348	1-249-433-11	CARBON	22K	5%	1/4W	
R222	1-249-427-11	CARBON	6. 8K	5%	1/4W (AEI	P. G. IT. F		1-249-433-11		22K	5%	1/4W	
R223	1-249-432-11		18K		1/4W (AEI		I		***************************************		***	,,	
R224	1-249-421-11		2. 2K				R352	1-249-437-11	CARRON	47K	5%	1/4W	
R225	1-249-441-11		100K		· ·		R410	1-249-435-11		33K	5%	1/4W	
R226	1-249-429-11		10K	5%			R411	1-249-435-11		33K	5%	1/4W	
NZZU	1-243-423-11	CARDON	IVK	U/4	1/ 411		R412	1-249-426-11		5. 6K		1/4W	
0000	1 040 441 11	CARRON	1004	E#	1 / AW		R851						
R236	1-249-441-11		100K		1/4W		1001	1-249-417-11	CARBON	1 K	5%	1/4W	
R237	1-249-417-11		1K	5% EN	•		Doro	1 040 444 44	CADDON	4884	ra.	(/ 10)	
R238	1-249-438-11		56K	5%	-		R852	1-249-441-11		100K		1/4W	
R239	1-249-438-11		56K	5%	•		R853	1-249-425-11		4. 7K		1/4W	
R240	1-247-756-11	CARBON	2. 2K	5%	1/2W		R854	1-249-425-11		4. 7K		1/4W	
							R855	1-249-412-11		390	5%	1/4W	
R242	1-247-756-11	CARBON	2. 2K	5%	1/2W		R857	1-249-418-11	CARBON	1. 2K	5%	1/4W	
 № R244	1-217-156-00	RES. METAL	PLATE 0	. 22	5W	F							
R245	1-247-727-11	CARBON	10	5%	1/2W		R858	1-249-438-11	CARBON	56K	5%	1/4W	
R247	1-249-417-11	CARBON	1 K	5%	1/4W		R859	1-249-429-11	CARBON	10K	5%	1/4W	
R248	1-249-431-11		15K	5%	1/4W		R860	1-249-429-11		10K	5%	1/4W	
							R861	1-249-417-11		1 K	5%	1/4W	
R249	1-249-438-11	CARRON	56K	5%	1/4W		R862	1-249-441-11		100K		1/4W	

The components identified by mark or dotted line with mark are critical for safety.

Replace only with part number specified.

MAIN PANEL GEQ H. P. VOL

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description		Re	emark
R863	1-249-425-11	CARBON	4. 7K 5%	1/4W		C129	1-136-163-00	FILM	0.068uF	5%	50V
R864	1-249-425-11		4. 7K 5%			C130	1-130-478-00		0. 0039uF	5%	50V
R865	1-249-412-11	CARBON	390 5%	1/4W		C131	1-136-168-00		0. 18uF	5%	50V
R867	1-249-418-11	CARBON	1. 2K 5%	1/4W		C132	1-136-153-00	FILM	0. 01uF	5%	50 V
R868	1-249-438-11	CARBON	56K 5%	1/4W		C133	1-136-163-00	FILM	0.068uF	5%	50 V
R869	1-249-429-11	CARBON	10K 5%	1/4W		C134	1-126-301-11	ELECT	1 u F	20%	50V
R870	1-247-887-00	CARBON	220K 5%	1/4W		C135	1-136-158-00	FILM	0. 027uF	5%	50V
R871	1-249-433-11	CARBON	22K 5%	1/4W		C136	1-126-300-11	ELECT	0. 47uF	20%	50V
R872	1-249-423-11	CARBON	3.3K 5%	1/4W		C137	1-162-207-31	CERAMIC	22PF	5%	50V
R873	1-249-423-11	CARBON	3.3K 5%	1/4W		C210	1-126-022-11	ELECT	47uF	20%	16V
R876	1-249-417-11	CARBON	1 K 5%	1/4W		C221	1-126-059-11	ELECT	10uF	20%	50V
R878	1-247-887-00	CARBON	220K 5%	1/4W		C222	1-162-286-31	CERAMIC	220PF	10%	50V
<u> 1</u> R1076	1-212-940-00	FUSIBLE 1.	8 5%	1/2W	(UK)	C223	1-106-359-00	MYLAR	4700PF	5%	200V
<u> </u>	1-212-940-00	FUSIBLE 1.8	B 5%	1/2W	(UK)	C224	1-110-340-11	MYLAR	270PF	5%	50V
		< RELAY >				C225	1-136-154-00	FILM	0. 012uF	5%	50V
		NELKI >				C226	1-130-469-00	MYLAR	680PF	5%	50V
RY101	1-515-765-11	RELAY				C228	1-130-474-00	MYLAR	0.0018uF	5%	50V
						C229	1-136-163-00	FILM	0.068uF	5%	50V
		< SWITCH >				C230	1-130-478-00	MYLAR	0.0039uF	5%	50V
						C231	1-136-168-00	FILM	0.18uF	5%	50V
<u></u> 101 1 1	1-554-920-51	SWITCH, PUSH (AC POWER)	(1 KEY)							
						C232	1-136-153-00	FILM	0.01uF	5%	50V
		< TERMINAL BOAF	RD >			C233	1-136-163-00	FILM	0.068uF	5%	50V
						C234	1-126-301-11	ELECT	1uF	20%	50 V
TB101	1-537-238-11	TERMINAL BOARD				C235	1-136-158-00	FILM	0. 027uF	5%	50V
******	*******	************	******	*******	******	C236	1-126-300-11	ELECT	0. 47uF	20%	50V
*	A-4347-257-A	PANEL BOARD, CO	MPLETE			C237	1-162-207-31	CERAMIC	22PF	5%	50V
		************	*****			C277	1-136-159-00	FILM	0. 033uF	5%	50V
*	A-4347-276-A	GEQ BOARD, COMPL	.ETE			C308	1-164-159-11	CERAMIC	0. 1uF		50V
		*********	***			C351	1-164-159-11	CERAMIC	0. 1uF		50V
*	1-642-746-11	H. P. BOARD *******				C352	1-126-049-11	ELECT	22uF	20%	25V
*	1-642-747-11					C375	1-164-159-11	CERAMIC	0. 1uF		50V
•		******				1	1-164-159-11		0. 1uF		50V
						C419	1-136-153-00		0. 01uF	5%	50V
*	4-921-941-01	CUSHION (FL)				C420	1-162-294-31		0. 001uF	10%	50V
*		HOLDER, FL TUBE				C422		DOUBLE LAYERS	0. 22F	1070	5. 5V
*	4-950-658-01	HOLDER (FU), LE	D								
		HALDED LED				C423	1-161-494-00		0. 022uF		25V
*	4-950-660-01	NOLUEK, LED				C424	1-164-159-11		0. 1uF		50V
		< 040401T00 >				C425	1-126-049-11		22uF	20%	25V
		< CAPACITOR >				C426	1-161-494-00		0. 022uF		25V
050	1 104 057 00	ELECT	2 25	2.08/	EOV	C427	1-161-494-00	CERAMIC	0. 022uF		25V
C50	1-124-257-00		2. 2uF	20%		0.400	1 106 850 44	FLFAT	40.5		
C120	1-126-022-11		47uF	20%		C428	1-126-059-11		10uF	20%	50V
	1-126-059-11		10uF	20%		C429	1-126-059-11		10uF	20%	50 V
	1-162-286-31		220PF	10%		C430	1-161-494-00		0. 022uF		25V
C123	1-106-359-00	MILAK	4700PF	5%	200V	C431	1-161-494-00		0. 022uF	4.657	25V
C124	1-110-340-11	MYLAR	270PF	5%	50V	C432	1-162-294-31	CEKAMIC	0.001uF	10%	50V
	1-136-154-00		0. 012uF		50V	C433	1-126-059-11	FLECT	10uF	20%	50V
	1-130-469-00		680PF	5%	50 V	C434	1-126-059-11		10uF	20%	50V
	1-136-159-00		0. 033uF		50V	C435	1-161-374-11		0. 0015uF	20%	50 V
	1-130-474-00		0. 0018ul		50V	C436	1-161-494-00		0. 0015ur 0. 022uF	Z U76	25V
V120	. 100 414 00	67777	2. 00 1001	. 0/4	301	, 0700	. 101 434 00	VENAMI V	v. vzzur		734
The same	onante idanti	Street Box									

The components identified by mark A or dotted line with mark are critical for safety.

Replace only with part number specified.

PANEL	GEQ	H. P.	VOL
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Ref. No.	Part No.	Description			emark	Ref. No.	Part No.	Descrip	otion	Remari
	1-124-994-11	ELECT	100uF	20%	10V	D536	8-719-313-69	DIODE	SEL3210S-CD	
						D537	8-719-313-69	DIODE	SEL3210S-CD	
C444	1-126-049-11	ELECT	22 u F	20%	25V					
C601	1-136-165-00	FILM	0. 1uF	5%	50V	D538	8-719-313-69	DIODE	\$EL32108-CD	
C602	1-126-022-11	ELECT	47uF	20%	16V	D539	8-719-313-69	DIODE	SEL3210S-CD	
C603	1-126-022-11	ELECT	47uF	20%	167	D540	8-719-313-69	DIODE	SEL3210S-CD	
C995	1-126-301-11	ELECT	1uF	20%	50V	D541	8-719-313-69	DIODE	\$EL32108-CD	
						D542	8-719-313-69	DIODE	SEL3210S-CD	
		< CONNECTOR	>							
						D550	8-719-313-69	DIODE	SEL3210S-CD	
CN191	1-573-979-11	CONNECTOR, E	OARD TO BOARD	11P		D551	8-719-987-63	DIODE	1N4148M	
CN502	1-568-839-11	SOCKET, CON	IECTOR 23P			D552	8-719-987-63	DIODE	1N4148M	
CN503	1-568-322-11	PLUG, CONNEC	TOR 10P			D553	8-719-987-63	DIODE	1N4148M	
CN601	1-568-321-11	SOCKET, CONN	ECTOR 10P			D554	8-719-987-63	DIODE	1N4148M	
CN609	1-564-339-00	PIN, CONNECT	OR 5P							
						D554	8-719-987-63	DIODE	1N4148M	
	< COMPOS	ITION CIRCUI	T BLOCK >			D566	8-719-987-63	DIODE	1N4148M	
						D601	8-719-200-82	DIODE	11ES2	
CP501	1-239-054-11	COMPOSITION	CIRCUIT BLOCK			D603	8-719-933-33	DIODE	HZS6A1L	
CP502	1-239-054-11	COMPOSITION	CIRCUIT BLOCK							
CP503	1-239-054-11	COMPOSITION	CIRCUIT BLOCK				< FLUORES	CENT INC	OICATOR >	
CP504	1-239-054-11	COMPOSITION	CIRCUIT BLOCK							
						FL501	1-519-648-31	INDICAT	OR TUBE, FLUORESCENT	
		< DIODE >								
								< 10 >		
D55	8-719-200-82	DIODE	11ES2							
D127	8-719-000-54		UZL-6L3				8-759-633-78		289P	
D501	8-719-987-63		1N4148M		1		8-759-822-26		:7522K	
D502	8-719-200-82	DIODE	11ES2			10113	8-759-633-78		i289P	
D503	8-719-200-82	DIODE	11ES2				8-759-635-63		1943BSL	
						FC502	8-759-066-29	IC uP	D75108CW-C98	
D505	8-719-000-60	DIODE	UZL-6M2							
D506	8-719-987-63	DIODE	1N4148M			10503	8-759-822-27	IC LC	27565K	
D507	8-719-987-63	DIODE	1N4148M			10504	8-759-991-11	IC XR	11091DCP	
D508	8-719-987-63		1N4148M			IC601	8-759-820-62	IC LB	11639	
D509	8-719-987-63	DIODE	1N4148M							
DE 10	0 710 007 62	DIADE	111414014					< JACK	>	
D510 D511	8-719-987-63 8-719-987-63		1N4148M 1N4148M			J901	1-507-854-00	IACK DI	IONE (HEYDDHONES)	
	8-719-987-63					3301	1-307-634-00	JAUK, FR	IONE (HEADPHONES)	
D512	8-719-301-39		1N4148M					< COIL		
D521			SEL2210S-D SEL2210S-D					COIL	,	
D522	8-719-301-39	LED	3EL22103-0		ŀ	1.601	1 400 101 00	LMDHCTO	10 10u	
D523	8-719-301-39	LED	SEL2210S-D			L501	1-408-121-00	11100010	DR 22uH	
D524	8-719-301-39		SEL2210S-D		ļ			/ TDAUC	2 907212	
	8-719-301-39							< irAns	SISTOR >	
D525			SEL2210S-D			AEA1	0_700.600 05	TDAMOIC	בדום מפתמפתם כד	
D526	8-719-301-39 8-719-301-39		SEL2210S-D			Q501	8-729-620-05 8-729-620-05			
D527	0-113-301-39	LED	SEL2210S-D			Q502				
0520	0_710_201_20	1.50	0E122100 D		İ	Q511	8-729-900-36			
D528	8-719-301-39		SEL2210S-D			Q513	8-729-900-63			
D529	8-719-301-39		SEL2210S-D			Q514	8-729-900-63	TRANSIS	STOR DTA124ES	
D530	8-719-301-39		SEL2210S-D			4546		T04110:0	TAB - AA14175 UEF	
D531	8-719-301-39		SEL2210S-D			0515	8-729-119-76			
D532	8-719-301-39	LED	SEL2210S-D			Q516	8-729-620-05			
						0517	8-729-620-05			
D533	8-719-301-39		SEL2210S-D			0518	8-729-620-05			
D534	8-719-301-39		SEL2210S-D			0519	8-729-620-05	TRANSIS	STOR 2SC2603-EF	
D535	8-719-313-69	DIADE	SEL3210S-CD							

PANEL GEQ H. P. VOL

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
Q520	8-729-620-05		2SC2603-	EF		R529	1-249-424-11	CARBON	3. 9K	5%	1/4W
Q521	8-729-620-05		2SC2603-			R530	1-249-417-11	CARBON	1 K	5%	1/4W
0530	8-729-900-36		DTC124ES								
Q555	8-729-900-63	TRANSISTOR	DTA124ES			R532	1-249-421-11	CARBON	2. 2K	5%	1/4W
						R533	1-249-421-11	CARBON	2. 2K	5%	1/4W
		< RESISTOR >				R534	1-249-441-11	CARBON	100K	5%	1/4W
						R535	1-249-441-11	CARBON	100K	5%	1/4W
R40	1-249-421-11	CARBON	2. 2K	5%	1/4W	R536	1-249-417-11	CARBON	1 K	5%	1/4W
R127	1-247-852-11	CARBON	7. 5K	5%	1/4W						
R128	1-247-903-00	CARBON	1M	5%	1/4W	R537	1-249-417-11		1 K	5%	1/4W
R129	1-247-903-00	CARBON	1M	5%	1/4W	R538	1-249-417-11		1 K	5%	1/4W
R130	1-247-903-00	CARBON	1M	5%	1/4W	R539	1-249-417-11		1 K	5%	1/4W
						R540	1-249-417-11		1 K	5%	1/4W
R131	1-247-903-00		1M	5%	1/4W	R541	1-249-417-11	CARBON	1 K	5%	1/4W
R132	1-247-903-00		1M	5%	1/4W						
R133	1-247-903-00		1M	5%	1/4W	R542	1-249-417-11		1K	5%	1/4W
R134	1-247-903-00		1M	5%	1/4W	R544	1-249-417-11		1K	5%	1/4W
R135	1-247-852-11	CARBON	7. 5K	5%	1/4W	R545	1-249-429-11		10K	5%	1/4₩
		0.10001	7 FV	F8/	4 / AW	R546	1-249-417-11		1K	5%	1/4₩
R227	1-247-852-11		7. 5K		1/4W	R547	1-249-429-11	CARBUN	10K	5%	1/4W
R228	1-247-903-00		1M	5%	1/4W 1/4W	R548	1-249-429-11	CADDON	10K	5%	1/4W
R229	1-247-903-00		1M 1M	5% 5%	1/4W	R549	1-249-429-11		1 K	5%	1/4₩ 1/4₩
R230	1-247-903-00		1M	5%	1/4W	R550	1-249-417-11		1 K	5%	1/4W
R231	1-241-903-00	CARBON	LM	376	1/411	R551	1-249-435-11		33K	5%	1/4W
R232	1-247-903-00	CADDON	1M	5%	1/4W	R552	1-249-437-11		47K	5%	1/4W
R232	1-247-903-00		1M	5%	1/4W	11002	1 243 407 11	VALIDOR	4114	V/8	17 411
R234	1-247-903-00		1M	5%	1/4W	R553	1-249-429-11	CARRON	10K	5%	1/4W
R235	1-247-852-11		7. 5K		1/4W	R554	1-249-437-11		47K	5%	1/4W
R314	1-249-417-11		1K	5%	1/4W	R555	1-249-429-11		10K	5%	1/4W
11017	1 240 411 11	on no		• • • • • • • • • • • • • • • • • • • •	,,	R556	1-247-903-00		1M	5%	1/4W
R315	1-249-417-11	CARBON	1 K	5%	1/4W	R561	1-249-410-11		270	5%	1/4W
R346	1-249-425-11		4. 7K		1/4W						
R399	1-249-405-11		100	5%	1/4W	R562	1-249-411-11	CARBON	330	5%	1/4W
R408	1-249-405-11	CARBON	100	5%	1/4W	R563	1-249-411-11	CARBON	330	5%	1/4W
R409	1-249-419-11	CARBON	1. 5K	5%	1/4W	R564	1-249-411-11	CARBON	330	5%	1/4W
						R565	1-249-410-11	CARBON	270	5%	1/4W
R413	1-249-441-11	CARBON	100K	5%	1/4W	R566	1-249-411-11	CARBON	330	5%	1/4W
R414	1-249-432-11	CARBON	18K	5%	1/4W						
R415	1-247-891-00	CARBON	330K	5%	1/4W	R567	1-249-411-11	CARBON	330	5%	1/4W
R416	1-249-425-11	CARBON	4. 7K	5%	1/4W	R568	1-249-411-11		330	5%	1/4W
R417	1-249-437-11	CARBON	47 K	5%	1/4W	R569	1-249-410-11		270	5%	1/4W
						R570	1-249-410-11		270	5%	1/4W
R418	1-247-891-00		330K	5%	1/4W	R571	1-249-410-11	CARBON	270	5%	1/4W
R421	1-249-433-11		22K	5%	1/4W	0524	4 040 440 44	0.100011	070	F#/	
R422	1-249-411-11		330	5%	1/4W	R572	1-249-410-11		270	5%	1/4W
R423	1-249-417-11		1 K	5%	1/4W	R573	1-249-399-11		33	5%	1/4W
R424	1-247-903-00	CARBON	1M	5%	1/4W	R574	1-249-399-11		33	5%	1/4W
		A + 8 0 A W	4.1/	re/	4 / 4111	R575	1-249-399-11		33	5%	1/4W
R499	1-249-417-11		1K	5%	1/4W	R576	1-249-399-11	MUDAKO	33	5%	1/4W
R521	1-249-425-11		4. 7K		1/4W	0577	1_940.900.44	CARRON	22	EW.	1 / AW
R522	1-249-425-11		4. 7K		1/4W	R577	1-249-399-11		33	5% 5%	1/4W
R524	1-249-417-11		1K	5%	1/4W	R578	1-249-411-11		330	5% 5%	1/4W 1/4W
R525	1-249-425-11	CARBUN	4. 7K	3%	1/4W	R579	1-249-411-11		330 330	5% 5%	1/4W
DEAG	1 040 400 44	CADDON	100	EW.	1/4W	R580 R581	1-249-411-11		330	5%	1/4W
R526	1-249-429-11		10K 10	5% 5%	1/4W	1001	1 243-411-11	VARIOUR	000	U/U	1/ 711
R527	1-249-393-11		1 K	5%	1/4 W 1/4W	R582	1-249-411-11	CARRON	330	5%	1/4W
R528	1-249-417-11	UMNOUN	17.	J/0	1/ 417	1 1002	1 43-411-11	VIVIDAM	000	V/6	1/ 711

PANEL GEQ	H. P.	VOL
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Ref. No.	Part No.	Description		Remark
R586	1-249-425-11	CARBON	4. 7K	5% 1/4W
R588			4. 7K	5% 1/4W
R589	1-249-425-11		4. 7K	5% 1/4W
R595	1-249-437-11		47K	5% 1/4W
	. 2.0			.,
R596	1-249-437-11	CARBON	47K	5% 1/4W
R597	1-249-437-11	CARBON	47K	5% 1/4W
R598	1-249-437-11	CARBON	47K	5% 1/4W
R599	1-249-417-11	CARBON	1 K	5% 1/4W
R601	1-249-412-11	CARBON	390	5% 1/4W
R602	1-249-425-11		4.7K	5% 1/4W
R603	1-249-429-11	CARBON	10K	5% 1/4W
R604	1-249-429-11	CARBON	10K	5% 1/4W
R605	1-249-401-11	CARBON	47	5% 1/4W
R607	1-247-830-11	CARBON	910	5% 1/4W
	1-247-747-11		470	5% 1/2W
	1-247-747-11		470	5% 1/2W
R1599	1-249-425-11	CARBON	4. 7K	5% 1/4W
		< VARIABLE R	ESISTOR >	
RV501	1-238-459-11	RES. VAR. CA	RBON 100K	(BALANCE)
RV502	1-241-307-11	RES, VAR, CA	REBON 10K/	'10K (DBFB LEVEL)
RV601	1-238-708-21	RES. VAR. CA	RBON 10K/1	OOK/100K (VOLUME)
		< SWITCH >		
\$501	1-554-303-21	SWITCH, TACT	ILE (EQ-RE	(C)
\$502		SWITCH, TACT	-	. *
\$503		SWITCH, TACT	ILE (EQ)	
\$504	1-554-303-21	SWITCH, TACT	ILE (SURRO	UND MODE)
\$505	1-554-303-21	SWITCH, TACT	ILE (MEMOF	(Y)
\$511	1-554-303-21	SWITCH, TACT	ILE (DBFB)	
\$512	1-554-303-21	SWITCH, TACT	ILE (CD)	
\$513	1-554-303-21			NAL FILE 1-5)
\$514		SWITCH, TACT		
\$515	1-554-303-21	SWITCH, TACT	ILE (REVRS	SE)
\$516	1-554-303-21	SWITCH, TACT	ILE (SURRO	OUND LEVEL)
	1-554-303-21			
	1-554-303-21			
\$523	1-554-303-21	SWITCH, TACT	ILE (SELE	; 10)
\$524	1-554-303-21	SWITCH, TACT	ILE (A)	
0505	4 554 000 00	OWLITAL TAAT	11 C /CLAT	
	1-554-303-21			
8526	1-554-303-21	SWITCH, TACT	ILE (PHONO)) '\
8532	1-554-303-21 1-554-303-21	SWITCH, TACT	ILE (AIDE)	")
8533	1-554-303-21	SWITCH, TACT	ILE (V)	
5534	1-554-303-21	SWITCH, TACT	ILE (D)	
9525	1-554-303-21	CMITCH TACE	IIE (Dico	AV)
\$535	1-334-303-21	SMITCH, TACT	ILL (DISPI	

S536 1-554-303-21 SWITCH, TACTILE (PROGRAM FUNKTION)

Ref. No.	Part No.	Description	Remark
		< VIBRATOR >	
X501	1-577-359-2	1 VIBRATOR, CERAMIC (4.19M	Hz)
******	********	***************	*******
		MISCELLANEOUS	

8	1-690-697-1	1 WIRE (FLAT TYPE) (23 CORE)
№ 56	1-575-654-1	1 CORD, POWER (AEP, G, IT, EE)	
<u>∱</u> 56	1-575-669-2	1 CORD, POWER (UK)	
<u> </u>	1-532-259-0	0 FUSE (T1.6A)	
<u>1</u> F103	1-532-203-0	0 FUSE (T2.0A)	
1 € 104	1-532-203-0	0 FUSE (T2. 0A)	
		1 TRANSFORMER, POWER	
******	*******	***********	******
	ACCESSOR	ES & PACKING MATERIALS	
	*******	*******	
	4-920-940-0	1 SHEET (A), PROTECTION	
	4 094 050 0	1 CUSHION	

HARDWARE LIST

#1	7-685-646-79	SCREW	+BVTP 3X8 TYPE2 N-S
#2	7-621-773-93	SCREW	(PANEL 2.6 TP2)
#3	7-682-548-04	SCREW	+BVTT 3X8 (S)
#4	7-685-650-79	SCREW	+BVTP 3X16 TYPE2 IT-3
#5	7-682-560-04	SCREW	+BVTT 4X6 (S)
#6	7-621-849-00	SCREW	(BV/RING)

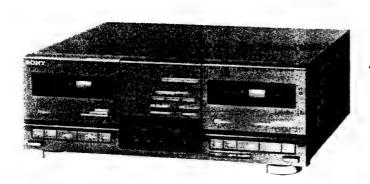
The components identified by mark A or dotted line with mark are critical for safety.

Replace only with part number specified.

7A200



SERVICE MANUAL



AEP Model UK Model E Model Australian Model East European Model

• This set is the deck section in LBT-D507/D507CD/D507CDM.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol Da are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	TC-H1600
Tape Transport	DECK A: TCM-190RA12C
Mechanism Type	DECK B: TCM-190RB22C

SPECIFICATIONS

Recording system Frequency response 4-track 2-channel stereo
DOLBY NR OFF
With Type IV cassette
(Sony METAL-ES)
30 Hz to 15 kHz (±3 dB)
With Type II cassette (Sony UX-S)
40 Hz to 14 kHz (±3 dB)
With Type I cassette (Sony HF-S)
40 Hz to 14 kHz (±3 dB)

Wow and flutter Weight

Weight Dimensions ± 0.2 % (DIN) Approx. 3.4 kg

Approx. 355 · 131 · 304 mm (w/h/d, including projections)

Design and specifications are subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.





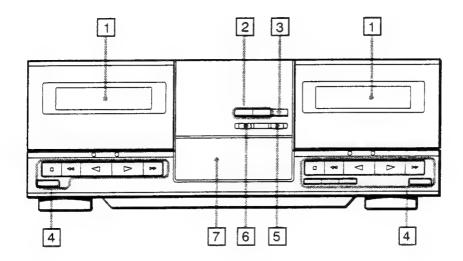
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SECTION 1 GENERAL

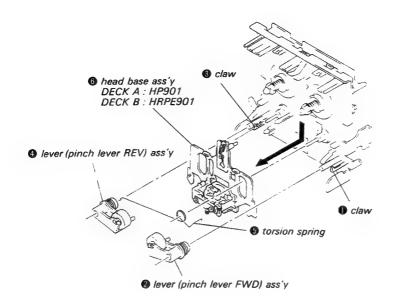
Location of Controls

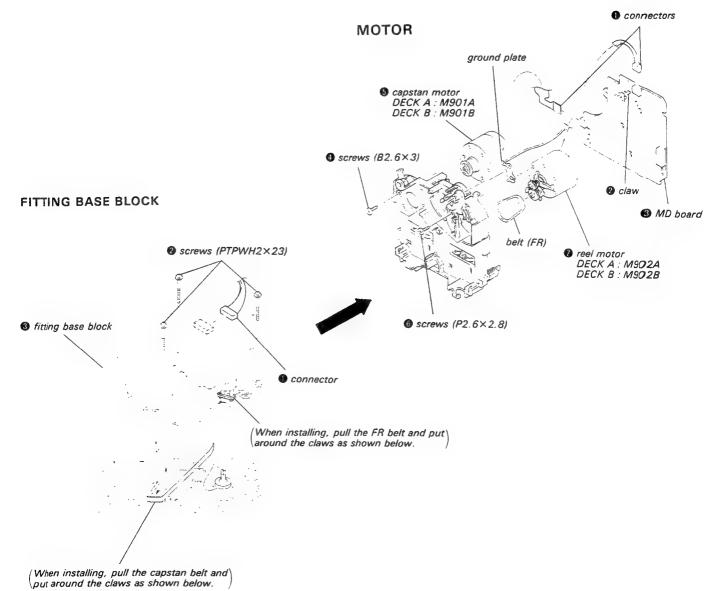
This section is extracted from instruction manual.



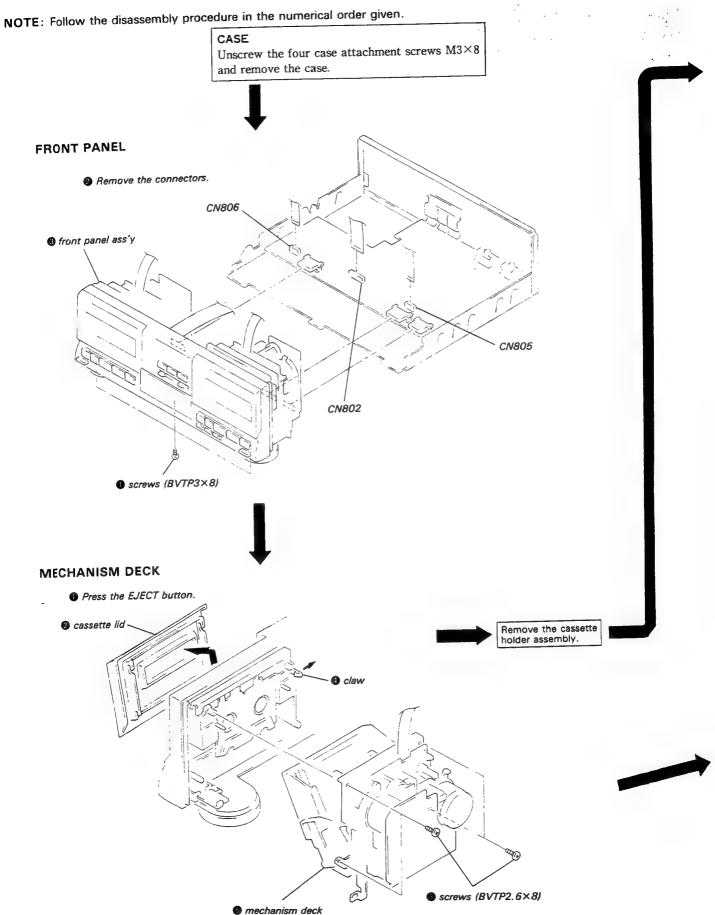
- Cassette holders
- 2 SYNCHRO DUBBING buttons (44)
- 3 CD SYNCHRO button (48)
- 4 Tape operation buttons
 - ← Leftward fast winding/AMS*,
 - ►► Rightward fast winding/AMS*,
 - ► Forward play, ◀ Reverse play,
 - Stop, ♠ Eject, Pause (deck B only),
 - O Record muting (deck B only),
 - Record (deck B only)
- 5 DOLBY NR (noise reduction) switch (36)
- 6 DIRECTION MODE selector (32, 36, 44, 48)
- 7 Display window
- * AMS is the abbreviation of Automatic Music Sensor.

HEAD





SECTION 2 DISASSEMBLY



SECTION 3 MECHANICAL ADJUSTMENTS

SECTION 4 ELECTRICAL ADJUSTMENTS

PRECAUTION

 Clean the following parts with a denatured-alcoholmoistened swab;

record/playback/erase head

pinch roller

rubber belts

capstan

idler

Demagnetize the record/playback head with a head demagnetizer.

(Head demagnetizer do not approach for the erase head.)

- 3. Do not use a magnetized screwdriver for the adjustments.
- 4. After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed in the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	35 to 60g · cm (0.49 to 0.83 oz · inch)
FWD Back tension	CQ-102C	2 to 6g·cm (0.03 to 0.08 oz·inch)
REV	CQ-102RC	35 to 60g * cm (0.49 to 0.83 oz * inch)
REV Back tension	CQ-102RC	2 to 6g·cm (0.03 to 0.08 oz·inch)
FF. REW	CQ-201B	70 to 110g · cm (0.98 to 1.52 oz · inch)

Note: The adjustment should be performed in the order given in the service manual. As a rule, adjustment about playback should be performed before adjustment about recording.

The adjustments should be performed for both L-CH and R-CH.

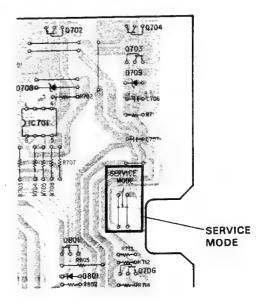
Test Mode

The Test mode is acrivated by shorting Test Poing Service mode (IC801 64 pin changes over to "L") with the POWER switch in OFF position, then turning on the POWER switch.

In this mode, the following functions operate:

- Source monitor
 Line mute is cancelled during recording.
- High speed playback
 High speed playback is executed when the HIGH SPEED
 (DUBBING) button is jpressed during playback. Normal
 speed playback is restored when the button is pressed
 again.
- Record memory
 The tape counter is reset to "0" at the record start point.
 After adjustment, open the Service mode to cancel the Test mode.

(MAIN BOARD) (CONDUCTOR SIDE)

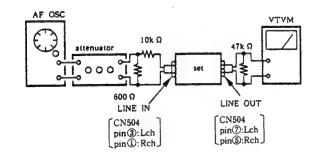


 Switches and controls should be set as follows unless otherwise specified.

• Standard Record:

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

- Record Mode -



Standard Input Level

input terminal	LINE IN
source impedance	10kΩ
input level	0.25V (-10dB)

Standard Output Level

output terminal	LINE OUT	
load impedance	47kΩ	
output level	0.44V (-5dB)	

Test tape

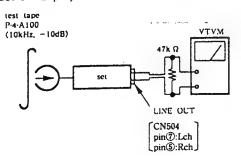
ſ	Туре	Signal	Used for
Ì	P-4-A100	10kHz, -10dB	Azimuth Adjustment
İ	P-4-L300	315Hz, 0dB	PB Level Adjustment
l	WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

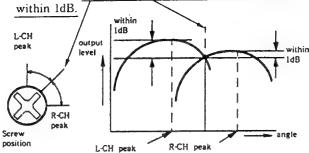
DECK A DECK B

Procedure:

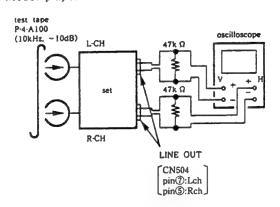
1. Mode: FWD playback

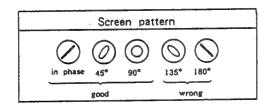


Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together



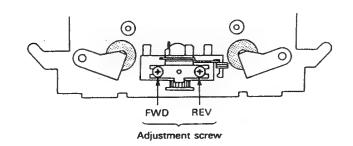
3. Phase Check Mode: playback





- 4. Set in the REV mode and repeat the step 1-3.
- 5. After the adjustment, lock the screws with locking compound.

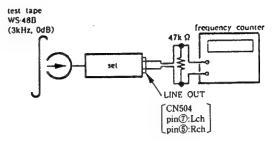
Adjustment Location: Record/playback head



Tape Speed Adjustment DECK A DECK B

Procedure:

Mode: playback



Perform high speed adjustment before normal speed adjustment.

(High speed adjustment)

- 1. Continue pressing the SYNCHRO DUBBING HIGH SPEED switch.
- Check that frequency counter reading is within the standard value 6,000 ± 60Hz.
- 3. If out of the standard, adjust each RV72 so that the frequency counter reading satisfies 6,000 ± 60Hz on both A and B decks.
- 4. Change over to Rev playback status, and repeat the above steps 1 to 3.

(Normal speed adjustment)

- Continue pressing the SYNCHRO DUBBING NORM SPEED switch.
- 2. Check that the frequency counter reading is within the standard value $3,000 \pm 30$ Hz.
- 3. If out of the standard, adjust each RV71 so that the frequency counter reading satisfies 3,000±30Hz on both A and B decks
- 4. Change over to REV playback status, and repeat the above steps 1 to 3.

Frequency difference between the beginning and the end of the tape should be within 3%.

Frequency difference between deck A and deck B the beginning of the tape should be within 1.0%.

Adjustment Location:

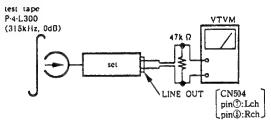
MD-A, MD-B board

Playback Level Adjustment

DECK A DECK B

Procedure:

Mode: playback



Adjust RV11 (L-CH), RV21 (R-CH) so that the reading on VTVM meets the adjustment limits below.

Adjustment Limits:

LINE OUT level: -7.7 ± 0.5 dB (0.30 - 0.33V)

Level difference between channels: less than 0.5dB. Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location: MD-A, MD-B board

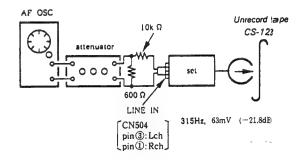
Record Bias Adjustment DECK B

Setting:

REC LEVEL control: Standard Record (See page 7).

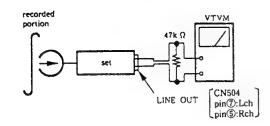
Procedure:

1. Mode: record



SECTION 5 DIAGRAMS

2. Mode: playback



Playback the signal recorded in step 1.

Confirm that the 10kHz playback output is $0\pm0.5dB$ relative to the 315Hz output. If necessary, adjust RV12 (L-CH), RV22 (R-CH) and repeat the steps given above.

Adjustment Location: MD-B board

Record Level Adjustment DECK B

Setting:

ne reading on

not change in

rom playback

ee page 7).

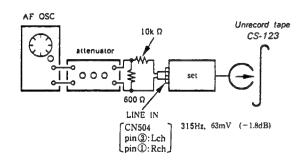
(-21.8dB)

0.33V) ss than 0.5dB

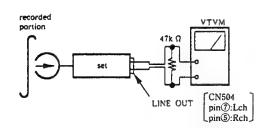
REC LEVEL control: Standard Record (See page 7).

Procedure:

1. Mode: record



2. Mode: playback

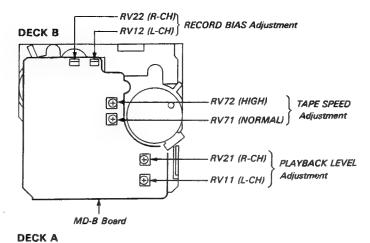


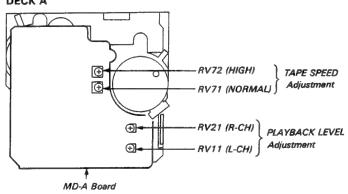
 Playback the signal recorded in step 1.
 Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat the step 1-2.

Adjustment Limits : $-3.8 dB \pm 0.5 dB$ ($0.47 \pm 0.53 V$)

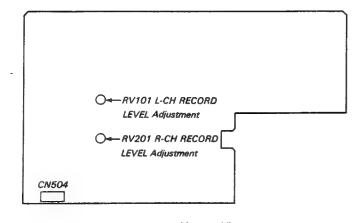
Adjustment Location: MAIN board (component side)

-Adjustment Parts Location Diagrams-

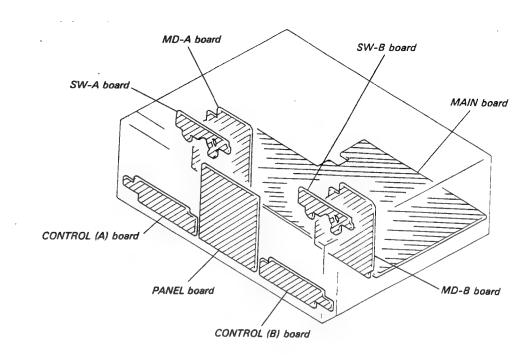




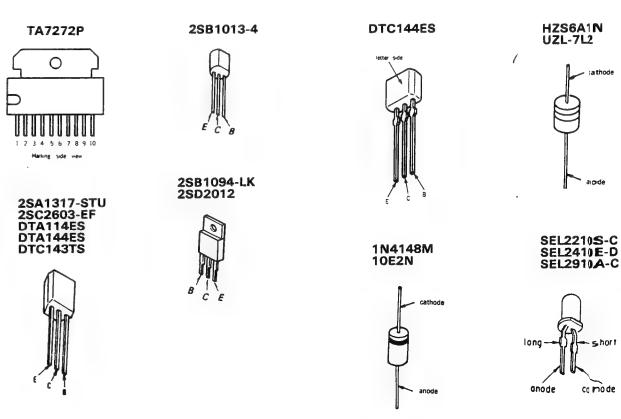
MAIN BOARD (COMPONENT SIDE)



5-1. CIRCUIT BOARDS LOCATION



5-2. SEMICONDUCTOR LEAD LAYOUTS



-10-

5-3. PRINTED WIRING BOARDS

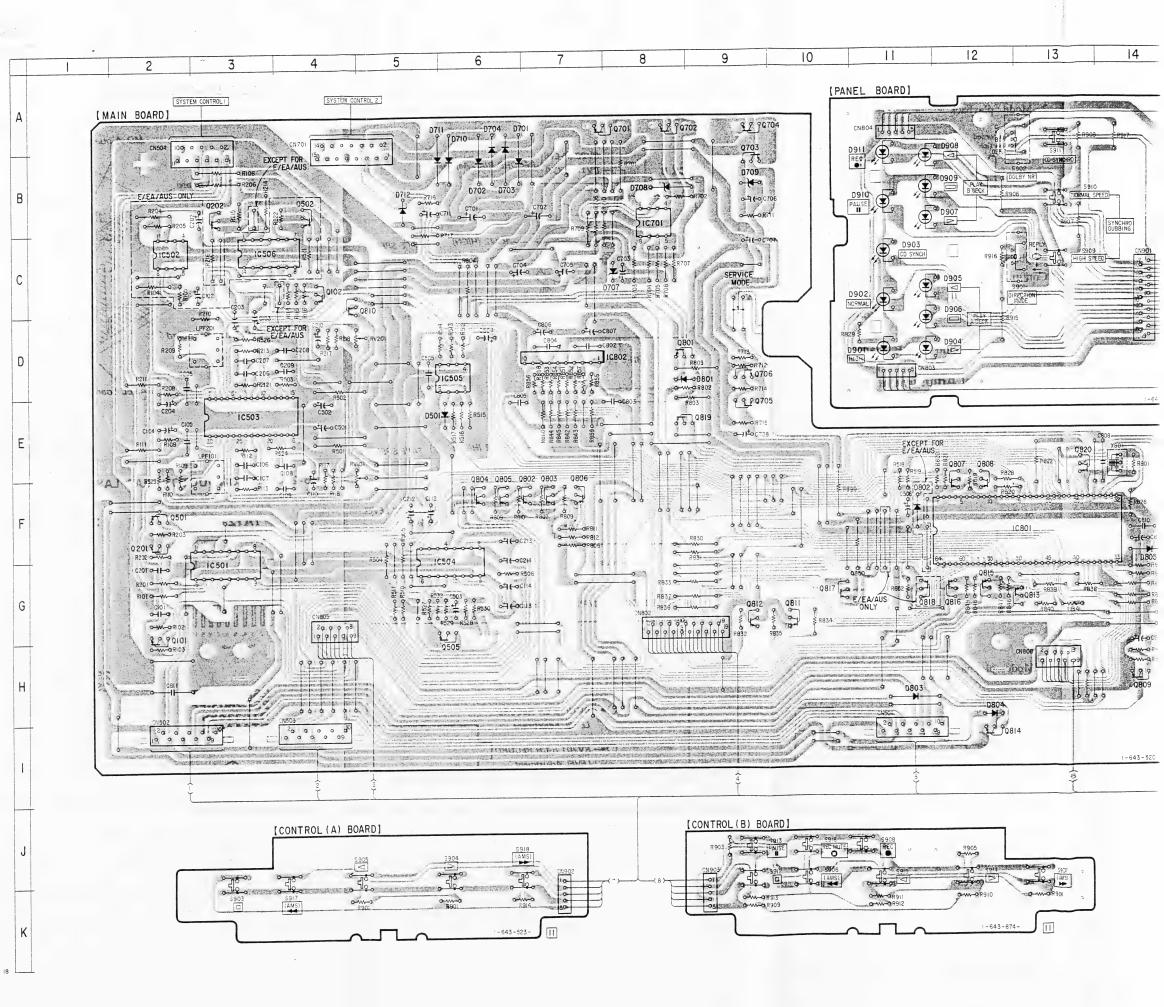
Semiconductor Location

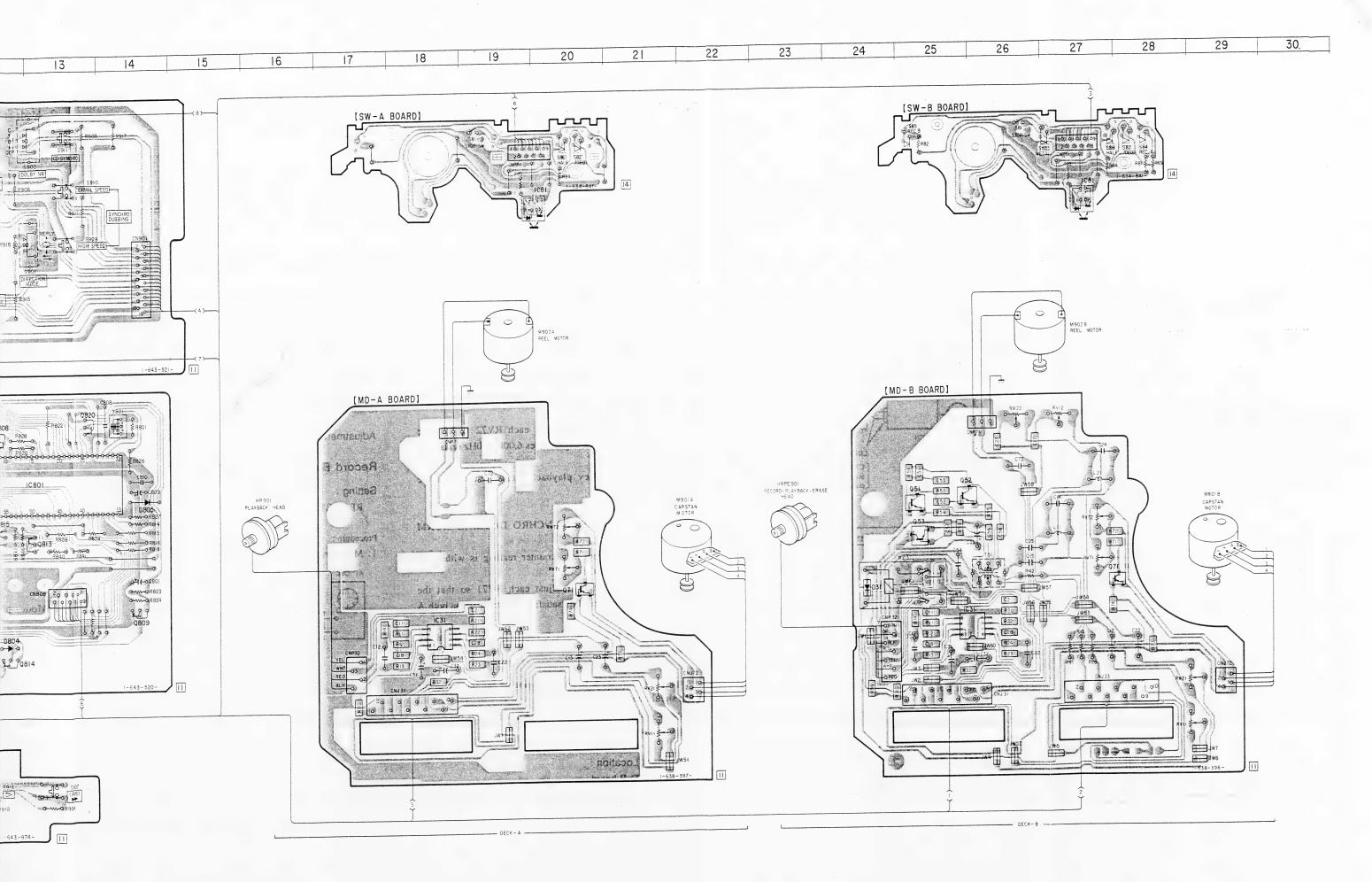
Ref. No.	Location	Ref. No.	Location
D31 D501 D701 D702 D703 D704 D707 D708 D709 D710 D711 D712 D801 D802 D803 D804 D805 D901 D902 D903 D904 D905 D906 D907 D908 D907 D908 D909 D910 D911 IC31(MD-A) IC31(SW-A) IC31(SW-A) IC31(SW-B) IC501 IC502 IC503 IC504 IC505 IC701 IC801 IC802	H-24 E-6 B-6 B-6 B-6 B-6 B-7 B-6 B-7 B-7 B-11 H-12 F-14 D-11 C-11 D-11 B-11 B-11 B-11 B-11 B-20 B-27 G-3 C-2 E-3 B-6 C-3 B-6 B-7 B-7 B-1 B-1 B-1 B-1 B-1 B-1 B-1 B-1 B-1 B-1	Q51 Q52 Q53 Q71(MD-A) Q71(MD-B) Q101 Q102 Q201 Q202 Q501 Q502 Q505 Q701 Q702 Q703 Q704 Q705 Q706 Q801 Q802 Q803 Q804 Q805 Q806 Q807 Q808 Q809 Q810 Q811 Q812 Q813 Q814 Q815 Q817 Q816 Q817 Q818 Q817 Q816 Q817 Q817 Q818 Q817 Q818 Q819 Q819 Q819 Q819 Q819 Q819 Q819	G-25 G-25 G-25 G-25 H-20 H-28 G-2 C-4 F-2 B-3 F-2 B-4 G-6 A-8 B-9 D-9 F-7 F-6 F-7 F-12 F-12 H-14 C-4 G-10 G-12 G-12 G-11 E-9 E-13

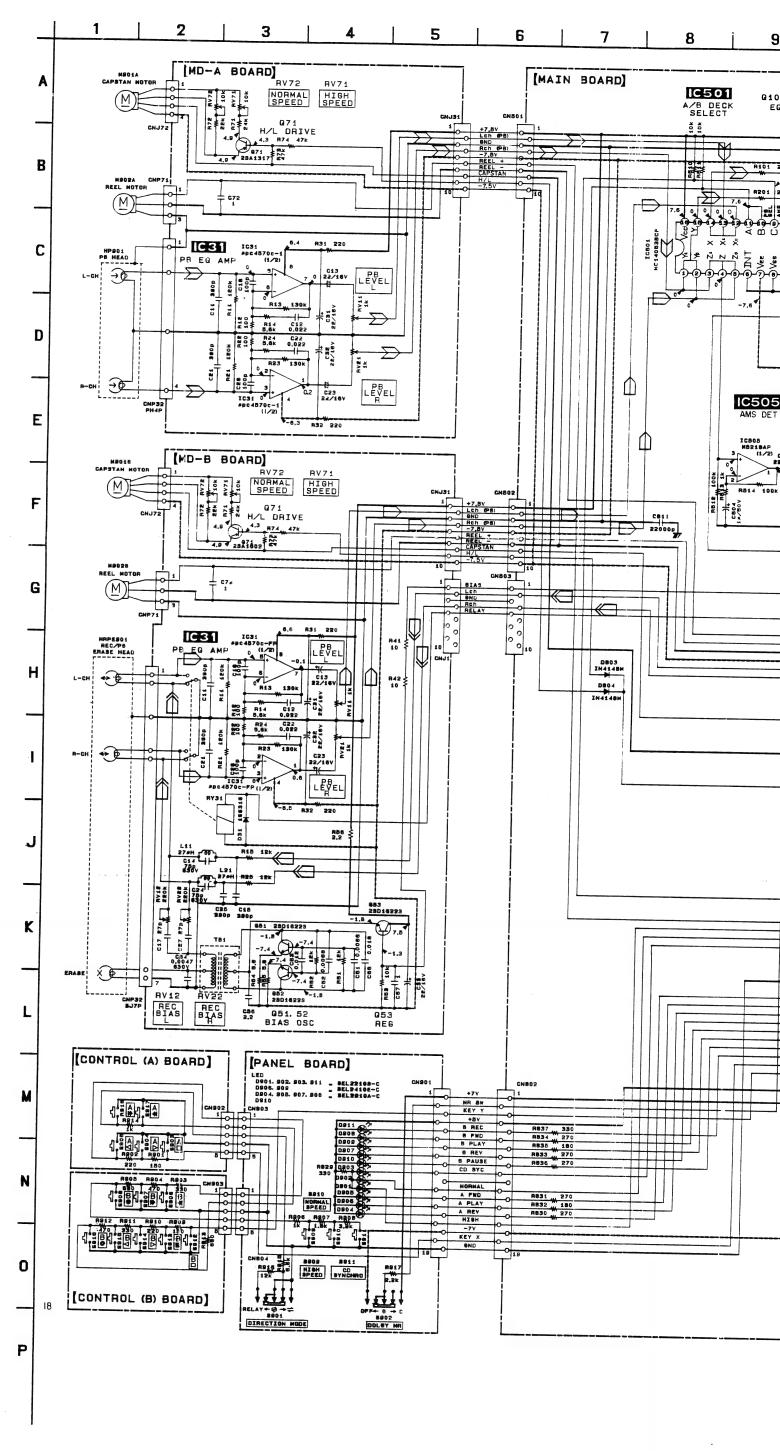
Note: \circ \circ ——: parts extracted from the component side.

EA:Saudi Arabia

AUS: Australian







All capacitors are in μF unless otherwise noted. pF: μμF
 50WV or less are not indicated except for electrolytics and tantalums.

• All resistors are in Ω and $^{1}\!/_{\!4}W$ or less unless otherwise specified.

• △ : internal component.

• == : B+ Line

B— Lineadjustment for repair.

 Voltage is dc with respect to ground under no-signal (detuned) conditions.
 no mark: REC

Voltages are taken with a VOM (Input Impedance 10MΩ).
 Voltage variations may be noted due to normal produc-

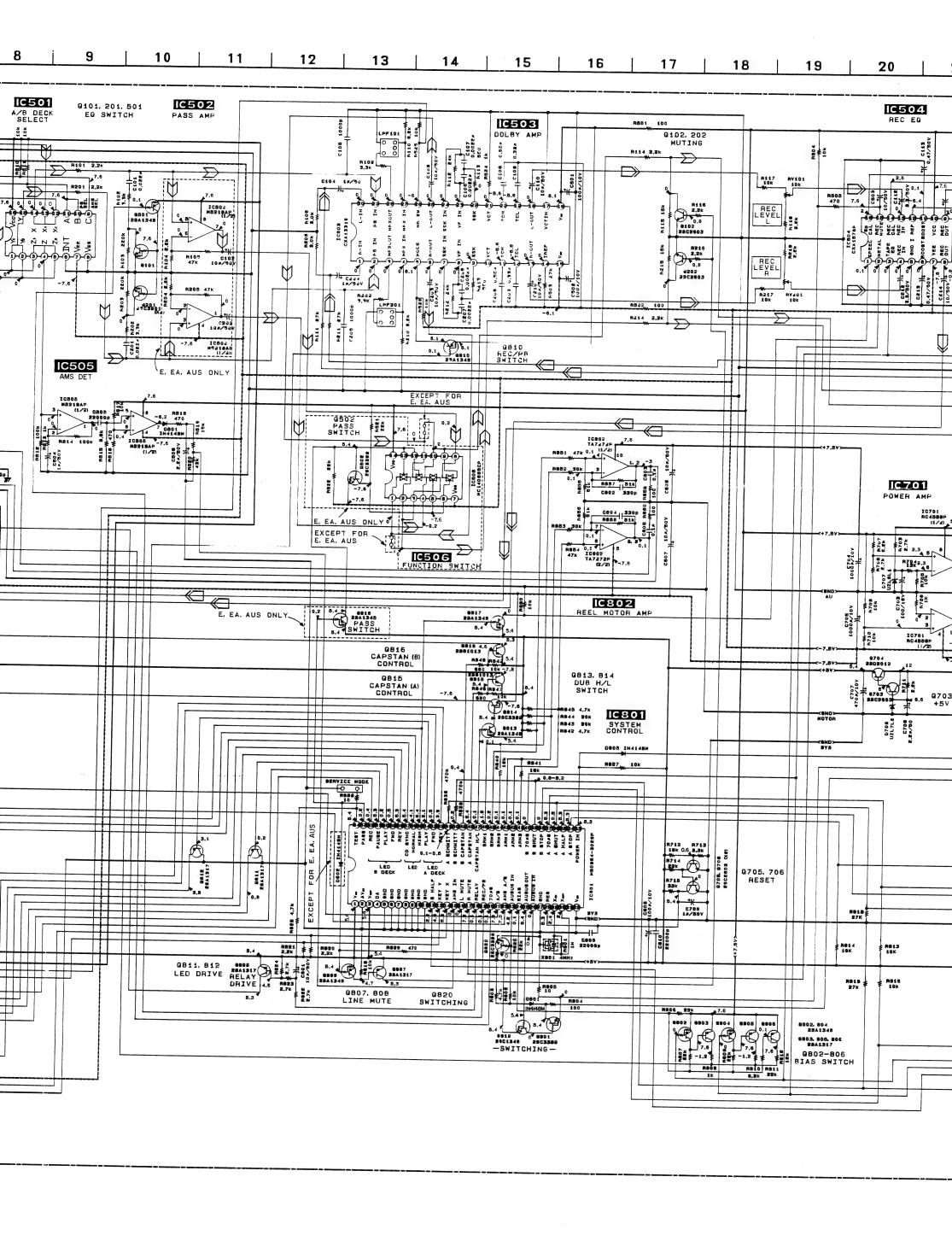
tion tolerances.Signal path.

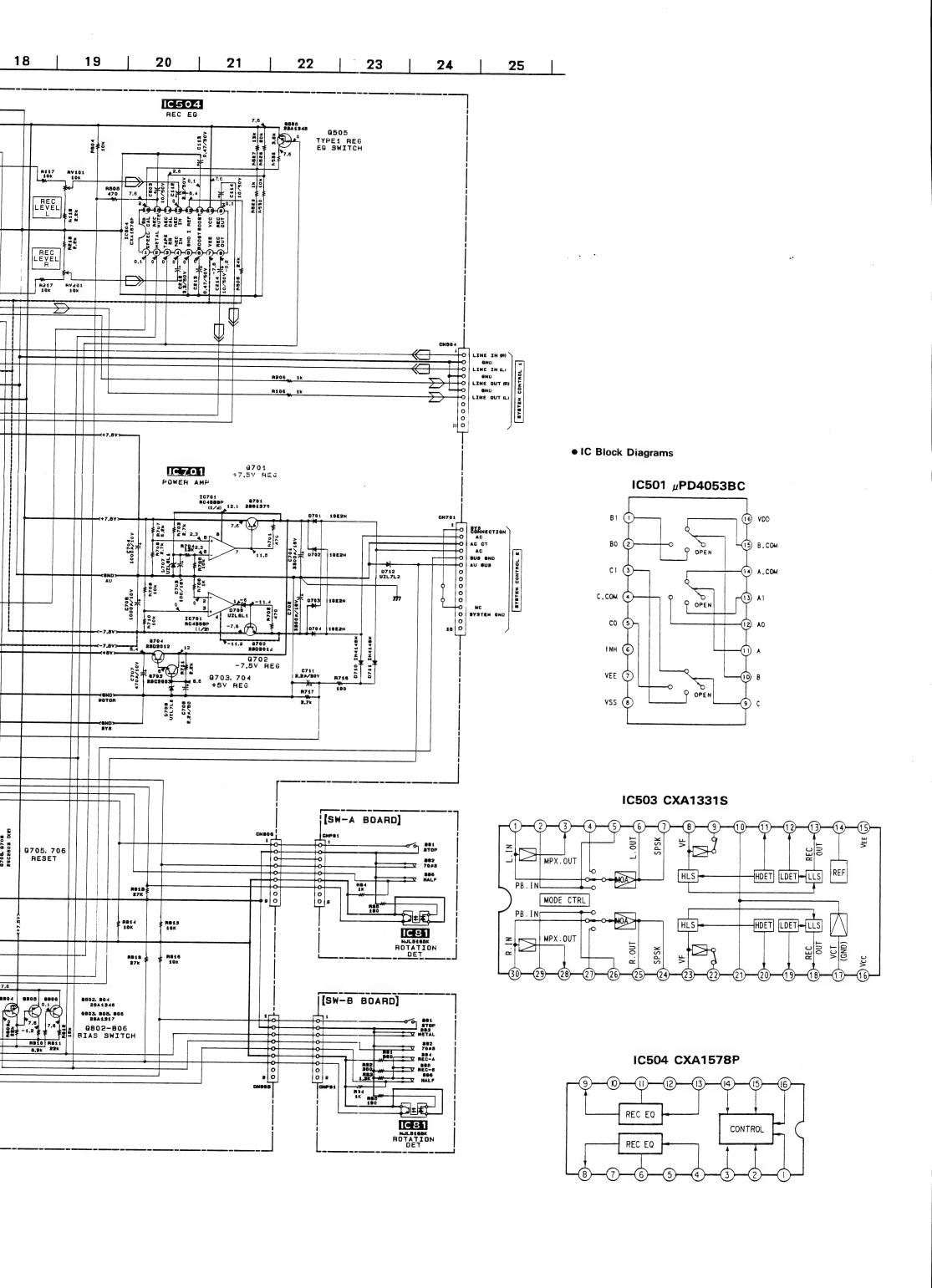
D : PB (DECK A)

☐ : PB (DECK B)
☐ : REC (DECK B)

EA:Saudi Arabia

AUS: Australian





SECTION 6 EXPLODED VIEWS

NOTE:

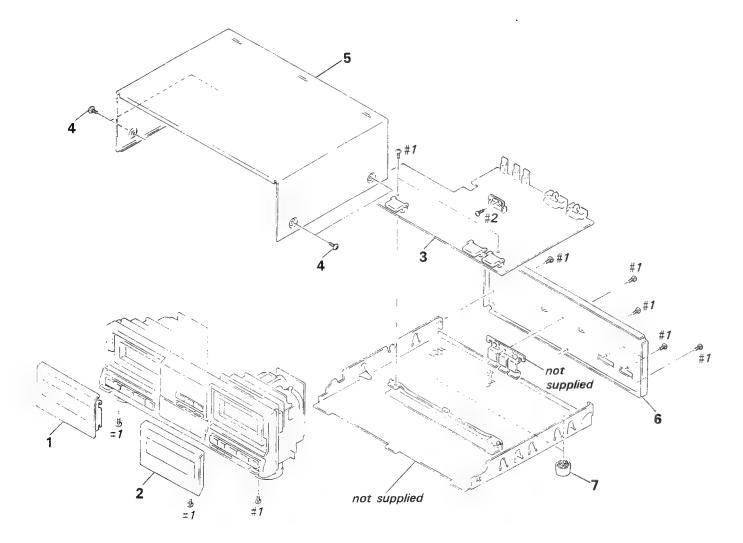
- · -XX, -X mean standardized parts, so they may have some differences from the original one.
- · Color Indication of Appearance Parts

KNOB, BALANCE(WHITE)...(RED)

Parts color Cabinet's color

- · Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- · The mechanical parts with no reference number in the exploded views are not supplied.
- · hardware (#mark) list is given in the last of this parts list.
- G : Germany
- IT : Italian
- EE : East European
- EA: Saudi Arabia
- AUS : Australian

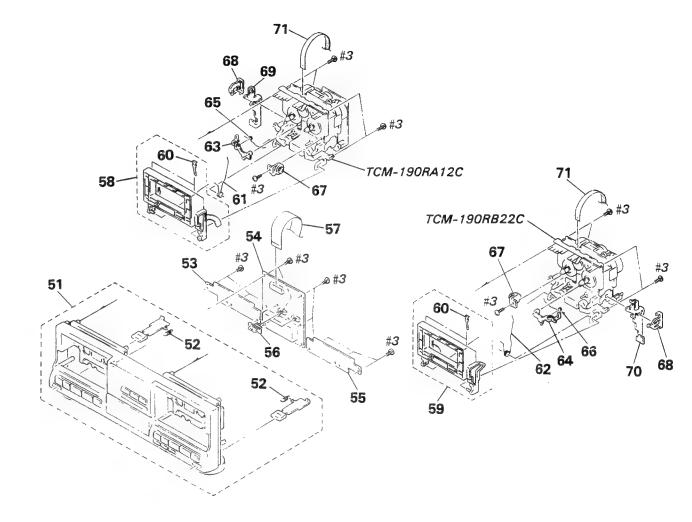
6-1. OVERALL SECTION



R	ef. No.	Part No.	Description	Remark
	1	X-3364-710-1	LID (A) ASSY, CASSETTE	
			(AEP. G. EE. UK. E.	EA, AUS)
	1	X-3364-711-1	LID (A) ASSY. CASSETTE (IT)	
	2	X-3364-712-1	LID (B) ASSY, CASSETTE	
			(AEP. G. EE. UK. E.	EA. AUS)
	2	X-3364-713-1	LID (B) ASSY. CASSETTE (IT)	
*	3	A-2006-741-A	MAIN BOARD. COMPLETE (AEP. G. 17	r. ee. uk)

Ref. No.	Part No.	Description	Rema
* 3	A-2006-742-A	MAIN BOARD, COMPLETE (E. EA. AUS)	1
4	3-363-099-01	SCREW (CASE +3X8 TP2)	
* 5	4-939-803-31	CASE (AEP. G. EE. UK. E. EA. AUS)	
* 5	4-939-803-71	CASE (IT)	
* 6	3-377-136-11	PANEL. BACK (AEP. IT. EE, UK. E. EA.	AUS)
* 6	3-377-136-21	PANEL, BACK (G)	
7	4-931-169-01	FOOT	

6-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-3364-706-1	PANEL ASSY. FRONT (AEP. G. EE. UK.	. E. EA. AUS)	61	3-354-959-01	SPRING (LOADING L). TORSION	
51	X-3364-707-1	PANEL ASSY, FRONT (IT)		62	3-354-960-01	SPRING (LOADING R), TORSION	
52	3-662-752-21	SPRING, TENSION		63	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
* 53	1-643-523-11	CONTROL (A) BOARD		64	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
* 54	1-643-521-11	PANEL BOARD		65	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
* 55	1-643-874-11	CONTROL (B) BOARD		66	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
56	3-377-110-01	KNOB (SLIDE) (AEP, G. EE, UK. E. EA,	. AUS)	67	3-354-963-01	DAMPER	
56	3-377-110-11	KNOB (SLIDE) (1T)		68	3-354-957-01	JOINT (LOCK LEVER)	
57	1-590-237-11	WIRE, FLAT TYPE (19 CORE)		* 69	3-363-638-01	LEVER (LOCK LEVER L)	
58	X-3340-194-1	HOLDER (L) ASSY. CASSETTE		* 70	3-363-639-01	LEVER (LOCK LEVER R)	
59	X-3340-195-1	HOLDER (R) ASSY. CASSETTE		71	1-690-906-11	WIRE (FLAT TYPE) (9 CORE)	
60	3-308-823-11	SPRING					

6-3. MECHA

/TCM-19

TCM-19

Ref. No. Part No

101 3-359-4 102 3-356-7 103 X-3359-104 3-356-7

106 X-3359-107 3-359-4 108 X-3359-

105

108

110

115

X-3359-

X-3364-X-3359-

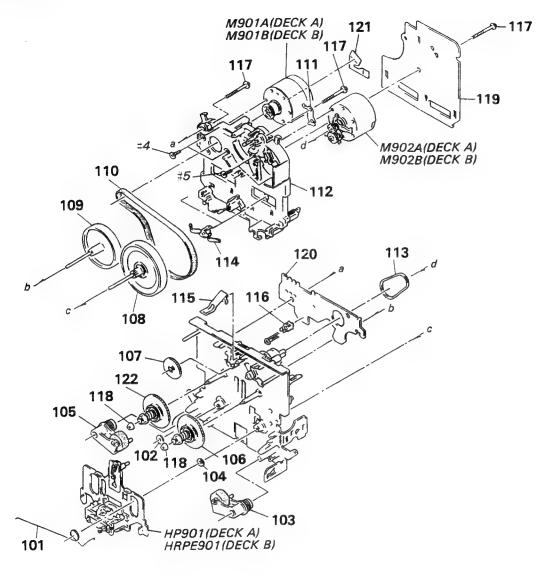
3-359-4

111 3-359-4 * 112 3-359-4 113 3-359-4 114 3-575-3 3-359-4

6-3. MECHANISM SECTION 1

(TCM-190RA12C) TCM-190RB22C)

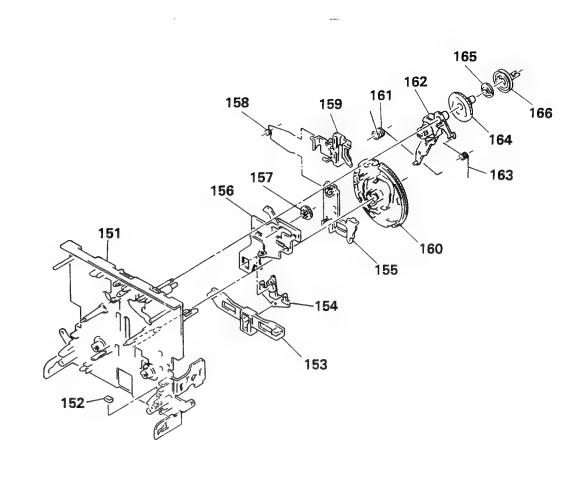
Remark



Ref. No.		Description	Remark	Ref. No.	Part No.	Description	Remark
101	3-359-455-01	SPRING. TORSION		116	3-343-419-01	HOLDER (S SENSER A)	
102	3-356-714-01	WASHER		117	3-359-414-01	SCREW (+PTPWH 2X23)	
103	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY		118	3-362-308-01	CAP (REEL)	
104	3-356-713-01	WASHER		* 119	A-2006-399-A	MD-A BORAD, COMPLETE (DECK A)	
105		LEVER (PINCH LEVER REV) ASSY		* 119	A-2006-400-A	MD-B BOARD. COMPLETE (DECK 8)	
106	X-3359-404-1	TABLE ASSY. REEL		* 120	1-634-841-14	SW-A BOARD (DECK A)	
107	3-359-424-01	GEAR (REV GEAR)		* 120	1-634-841-14	SW-B BOARD (DECK B)	
108		FLYWHEEL (FWD) COMPLETE ASSY	(DECK A)	121	1-638-983-11	MOTOR FLEXIBLE BOARD	
108		FLYWHEEL (FWD) ASSY (DECK B)	•	122	X-3362-078-1	TABLE ASSY (B). REEL	
109		FLYWHEEL (REV) ASSY		HP901	A-2003-837-A	BASE ASSY. HEAD (PB) (DECK A)	
110	3-359-417-01	BELT (FLAT), CAPSTAN		HRPE90)1A-2003-838-A	BASE ASSY, HEAD (REC/PB/ERASE	(DECK B)
111		PLATE, GROUND		M901A	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK A)	
* 112		BASE (THRUST RETAINER), FITTI	NG			MOTOR ASSY (CAPSTAN) (DECK B)	
113		BELT (FR), SQUARE				MOTOR ASSY (REEL) (DECK A)	
114		RETAINER, THRUST, CAPSTAN				MOTOR ASSY (REEL) (DECK B)	
115		SPRING (CASSETTE RETAINER). LE	AF				

6-4. MECHANISM SECTION 2

(TCM-190RA12C) TCM-190RB22C)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	X-3363-790-1	CHASSIS ASSY, MECHANICAL (DECK	A)	159	3-359-429-01	SLIDER (BRAKE PLATE)	
151	X-3359-415-1	CHASSIS ASSY, MECHANICAL (DECK	B)	160	3-359-420-01	GEAR (CAM GEAR)	
152	3-359-469-01	SPACER		161	3-359-456-01	SPRING (TRIGGER SPRING). TORSION	
* 153	3-359-425-01	SLIDER (REVERSE SLIDER)		162	X-3359-405-1	LEVER (FR ARM) ASSY	
154	3-359-426-01	LEVER (REVERSE LEVER)		163	3-359-453-01	SPRING (FR ARM). TORSION	
* 155	3-359-427-01	SLIDER (LEVERSE SLIDER)		164	3-359-419-01	GEAR (FR GEAR)	
* 156	3-359-415-01	SLIDER (TRIGGER SLIDER)		165	3-359-421-01	CLUTCH (REEL DISK)	
157	3-359-448-01	GEAR (TRIGGER)	1	166	3-359-418-01	PULLEY (FR PULLEY)	
158	3-359-454-01	SPRING. TORSION	1				
158	3-359-454-01	STRING, TORSTON					

SECTION 7 ELECTRICAL PARTS LIST

MAIN

PANEL

CONTROL (A)

CONTROL (B)

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- RESISTORS
 All resistors are in ohms
 METAL:Metal-film resistor
 METAL OXIDE:Metal Oxide-film resistor
 F:nonflammable

 Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• SEMICONDUCTORS
In each case, u:μ , for example:
uA...: μA..., uPA...: μPA...,
uPB...: μPB..., uPC...: μPC...,
uPD...: μPD...

• CAPACITORS uF: μF

• COILS uH: μH

G : Germany EA : Saudi Arabia

EE : East European

When indication parts by reference number, please include the board name.

The components identified by mark or dotted line with mark or are critical for safety.

Replace only with part number specified.

Les composants identifiés par une marque A sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifé.

Ref. No.	Part No.	Description		R	emark	Ref. No.	Part No.	Description			mark
*	A-2006-741-A	MAIN BOARD. CO	OMPLETE (AEP.	G, IT, E	E. UK)	C208	1-136-174-00	FILM	0. 56uf	5%	50V
•		*********				C209	1-136-171-00	FILM	0.33uF	5%	50 V
*	A-2006-742-A	MAIN BOARD, CO	OMPLETE (E. E/	A, AUS)		C210	1-126-059-11	ELECT	10uF	20%	50 V
		*********	*****		1	C212	1-126-162-11	ELECT	3. 3uF	20%	50V
*	1-643-521-11	PANEL BOARD				C213	1-126-300-11	ELECT	0. 47uF	20%	50V

*	1-643-523-11	CONTROL (A) BO	DARD		Ì	C214	1-126-059-11	ELECT	10uF	20%	50 V
		*********	***			C501	1-124-994-11	ELECT	100uF	20%	10V
*	1-643-874-11	CONTROL (B) BO	DARD			C502	1-124-994-11	ELECT	100uF	20%	10V
		*********	***		-	C503	1-126-059-11	ELECT	10uF	20%	50 V
						C504	1-126-301-11	ELECT	1uF	20%	50V
*	3-377-119-01	HOLDER, LED									
*	4-942-204-01	PLATE, GROUND				C505	1-161-494-00	CERAMIC	0. 022uF		25V
	7-685-645-79	SCREW +BVTP	3X6 TYPE2	N-S		C506	1-126-161-11	ELECT	2. 2uF	20%	50V
						C701	1-124-887-00	ELECT	3300uF	20%	16 V
		< CAPACITOR >				C702	1-124-887-00	ELECT	3300uF	20%	16 V
						C703	1-126-101-11	ELECT	100uF	20%	16V
C101	1-136-157-00	FILM	0. 022uF	5%	50V						
C102	1-126-059-11	ELECT	10uF 20%	50V (E.	EA, AUS)	C704	1-124-473-11	ELECT	1000uF	20%	10V
C103	1-126-059-11	ELECT	10uF	20%	50V	C705	1-124-473-11		1000uF	20%	10V
C104	1-126-301-11	ELECT	1uF	20%	50V	C706	1-126-161-11		2. 2uF	20%	50V
C105	1-162-294-31	CERAMIC	0. 001uF	10%	50V	C707	1-124-472-11		470uF	20%	10V
						C708	1-126-301-11	ELECT	1uf	20%	50 V
C106	1-130-475-00	MYLAR	0. 0022uF	5%	50V						
C107	1-130-475-00	MYLAR	0. 0022uF	5%	50V	C711	1-126-161-11		2. 2uF	20%	50V
C108	1-136-174-00	FILM	0. 56uF	5%	507	C801	1-126-059-11		10uF	20%	50V
C109	1-136-171-00	FILM	0. 33uF	5%	50V	C802	1-162-288-31		330PF	10%	50V
C110	1-126-059-11	ELECT	10uF	20%	50V	C803	1-136-165-00		0. 1uf	5%	50V
						C804	1-162-288-31	CERAMIC	330PF	10%	50V
C112	1-126-162-11	ELECT	3. 3uF	20%	50V						
C113	1-126-300-11	ELECT	0. 47uF	20%	50V	C805	1-136-165-00		0. 1uF	5%	50V
C114	1-126-059-11	ELECT	10uF	20%	50V	C806	1-126-059-11		10uF	20%	50V
C201	1-136-157-00	FILM	0. 022uf	5%	50V	C807	1-126-059-11		10uF	20%	50V
C202	1-126-059-11	ELECT	10uf 20%	50V (E,	EA, AUS)	C808	1-161-494-00		0. 022uf		25V
						C809	1-124-994-11	ELECT	100uF	20%	10V
C203	1-126-059-11	ELECT	10uF	20%	507						0.51
C204	1-126-301-11	ELECT	1uF	20%	50V	C810	1-161-494-00		0. 022uF		25V
C205	1-162-294-31	CERAMIC	0.001uF	10%	50V	C811	1-161-494-00	CERAMIC	0. 022uF		25V
C206	1-130-475-00	MYLAR	0. 0022uF	5%	50V						
C207	1-130-475-00	MYLAR	0. 0022uF	5%	50V		-				

MAIN PANEL CONTROL (A) CONTROL (B)

Ref. No.	Part No.	Descrip	tion		Remark	Ref. No.	Part No.	Descrip	tion 				Remark
		< CONNE	CTOR >			10504	8-752-055-61	IC CX	A1578P				
						10505	8-759-634-51	IC M5	218AP				
	1-580-784-11												
	1-580-784-11					ŀ	8-759-000-49		14066BCP	(E. EA	i, AUS)		
	1-580-784-11				CONTROL ()	1	8-759-945-58		4558P 0964-302SI	0			
	1-566-858-41 1-566-859-11					I	8-759-061-69 8-759-207-05						
# CN/UI	1-200-033-11	SUCKET,	CONNECTOR	JI (OIOILM	OUNTROL 27	10002	0 103 201 00	10 11	12121				
CN802	1-568-802-11	SOCKET.	CONNECTOR 1	9 P				< FILTE	R >				
	1-691-670-11												
* CN804	1-691-670-11	CONNECT	OR, BOARD TO	BOARD 5P			1-236-087-11						
	1-568-828-11					LPF201	1-236-087-11	FILTER.	LOW PASS				
* CN806	1-568-828-11	SOCKET,	CONNECTOR 9	P				Z TRANC	LCTAR >				
	* 500 000 11	COCKET	CONNECTOR 1	n p				< TRANS	13108 >				
	1-568-862-11 1-691-746-11					0101	8-729-900-74	TRANSIS	TOR DIC:	143TS			
	1-691-746-11					Q102	8-729-620-05			2603-			
T 011300	1 031 140 11	0011112011	J., J.,			0201	8-729-900-74			143TS			
		< DIODE	>			Q202	8-729-620-05	TRANSIS	TOR 2SC2	2603-	EF		
						0501	8-729-900-61	TRANSIS	TOR DTAI	14ES			
D501	8-719-987-63	DIODE	1N4148M										
0701	8-719-200-77		10E2N			Q502	8-729-900-89					A. AUS)	
D702	8-719-200-77		10E2N				8-729-900-65			144ES			
D703	8-719-200-77		10E2N			Q701	8-729-141-83 8-729-209-15			1094-	LK		
D7 0 4	8-719-200-77	DIODE	10E2N			Q702 Q703	8-729-620-05			2603-	FF		
0707	8-719-933-33	DIODE	HZS6A1L			4100	0 723 020 03	IIIAIIOIO	1011 2002	000	C1		
D708	8-719-933-33		HZS6A1L			Q704	8-729-209-15	TRANSIST	TOR 2SD2	012			
0709	8-719-000-78		UZL-7L2				8-729-620-05			603-	EF		
	8-719-987-63		1N4148M			0706	8-729-620-05	TRANSIST	TOR 2SC2	603-	EF		
D711	8-719-987-63		1N4148M				8-729-900-89			44ES			
						Q802	8-729-900-61	TRANSIST	TOR DTA1	1488			
	8-719-000-78		UZL-7L2			0000	0 700 001 04	TRANSICI	700 0011	217	0711		
D8 0 1	8-719-987-63		1N4148M	A IT CE I	١٧١	Q803 Q804	8-729-821-04 8-729-900-61			317- 14ES			
D802	8-719-987-63 8-719-987-63		1N4148M (AEF	', U, II, EE, I	JK)		8-729-821-04			317-			
D803 D804	8-719-987-63		1N4148M				8-729-821-04			317-			
0004	0-113 301 00	DIODE	7114740111			Q807	8-729-821-04			317-			
D805	8-719-987-63	DIODE	1N4148M										
	8-719-301-38	LED	SEL2210S-C	(H I GH)		0808	8-729-900-61	TRANSIST	OR DTA1	14E\$			
D902	8-719-301-38	LED	SEL2210S-C	-			8-729-821-04			317-			
D903 -	8-719-301-38	LED	SEL2210S-C	-		Q810	8-729-900-61			14ES			
D9 0 4	8-719-302-41	LED	SEL2910A-C	(A FWD)		Q811	8-729-821-04			317-			
0005	8-719-302-41	LED	SEL2910A-C	(A DEV)		Q812	8-729-821-04	IMANSISI	UN ZSMI	317-	310		
D905 D906	8-719-301-44		SEL2410E-D			Q813	8-729-900-61	TRANSIST	OR DTA1	14ES			
D9 0 7	8-719-302-41		SEL2910A-C	-		0814	8-729-900-89			44ES			
0908	8-719-302-41		SEL2910A-C	-		0815	8-729-801-84	TRANSIST	OR 2581	013-	4		
D9 O 9	8-719-301-44		SEL2410E-D		}	Q816	8-729-801-84	TRANSIST	OR 2581	013-	4		
						Q817	8-729-900-61	TRANSIST	OR DTA1	14ES			
D9 1 O	8-719-302-41		SEL2910A-C			****	0 700 000 00	TRANSICT	'AD D#11	4456	/r r	1 A 1	
D9 1 1	8-719-301-38	LED	SEL2210S-C	(REC)			8-729-900-65					A. AIS)	
		. 10 5					8-729-900-61 8-729-900-89			14ES			
		< IC >				Q820	0-172-200-03	1616manı	OR DIGI	4469			
10561	8-759-140-53	IC uPf	14053BC					< RESIST	OR >				
	8-759-634-51		18AP (E. EA. A	US)									
	8-752-059-55		13315			R101	1-249-421-11	CARBON	2.	. 2K	5%	14W	

MAIN	PANEL	CONTROL (A)	CONTROL (B)
1			0011110-1-7

Her. No.	Part No.	Description			Remark 	Ref. No.	Part No.	Description			Remark
R102	1-249-423-11		3. 3K	5%		R520	1-247-870-11		43 K	5%	
R103	1-247-887-00		220K		. 1	R521	1-249-433-11		22K		1/4W (E. EA. AUS)
R104	1-249-421-11				1/4W (E. EA. AUS)	R522	1-249-433-11		22K		1/4W (E. EA. AUS)
R105		CARBON			1/4W (E. EA. AUS)	R524	1-249-417-11		1 K	5%	
	, 2.0 .0,			***	, (3, 3	R525	1-249-429-11		10K	5%	
R106	1-249-417-11	CARBON	1 K	5%	1/4W						·
R108	1-247-842-11		3 K	5%		R526	1-249-429-11	CARBON	10K	5%	1/4W
R109	1-249-423-11		3. 3K			R527	1-247-858-11	CARBON	13K	5%	•
R110	1-249-428-11		8. 2K			R528	1-247-862-11		20K	5%	
R111	1-249-434-11		27K	5%	·	R529	1-249-417-11		1K	5%	•
		***************************************			.,	R530	1-249-429-11		10K	5%	•
R112	1-247-864-11	CARRON	24K	5%	1/4W				, , , ,	• • • •	.,
R113	1-249-414-11		560	5%	· .	R532	1-247-844-11	CARBON	3. 6K	5%	1/4W
R114	1-249-421-11		2. 2K			R701	1-249-413-11		470	5%	1/4W
R115	1-249-431-11		15K	5%	- 1	R702	1-249-413-11		470	5%	1/4W
R116	1-249-421-11		2. 2K			R703	1-249-422-11		2. 7K		1/4W
NIIV	1-243 421 11	ONIDON	2. 24	076	17 411	R704	1-247-858-11		13K	5%	1/4W
R117	1-249-429-11	CARRON	10K	5%	1/4W		1 247 000 11		1011	070	17 411
R118	1-249-421-11		2. 2K		·	R705	1-249-429-11	CARRON	10K	5%	1/4W
R201	1-249-421-11		2. 2K		1	R706	1-249-417-11		1K	5%	1/4W
R202	1-249-423-11		3. 3K			R707	1-247-850-11		6. 2K		1/4W
R202	1-247-887-00		220K		1/4W	R708	1-249-422-11		2. 7K		1/4W
N Z Q 3	1-241-001-00	OKNOON	2200	070	17 411	R709	1-249-429-11		10K		1/4W
R204	1-249-421-11	CAPRON	2 28	592	1/4W (E. EA. AUS)	11773	, 243 423 11	ONII DON	101	378	17 411
R204	1-249-437-11				1/4W (E, EA, AUS)	R710	1-249-429-11	CARRON	10K	5%	1/4 W
R205	1-249-417-11		1 K	5%		R711	1-249-421-11		2. 2K		1/4W
R208	1-243-417-11		3 K		1/4W	R712	1-249-432-11		18K	5%	1/4W
			3. 3K			R713	1-249-423-11		3. 3K		1/4W
R209	1-249-423-11	CARBON	J. J.	376	17 411	R714	1-249-433-11		22K		1/4W
0010	1 240 429 11	CADDON	8. 2 K	EW.	1/4W	8714	1-243-400-11	CARDON	221	376	17 411
R210	1-249-428-11			5%	1/4W	R715	1-249-435-11	CADRON	33K	5%	1/4W
R211	1-249-434-11		24K	5%	1/4W	R716	1-249-405-11		100	5%	1/4W
R212	1-247-864-11			5%	1/4W	R717	1-249-422-11		2. 7K		1/4W
R213	1-249-414-11		2. 2K		1/4W	R801	1-247-903-00		1M	5%	1/4W
R214	1-249-421-11	CANDUM	2. ZK	JA	1/411		1-247-303-00		10K		1/4W
DATE	1-249-431-11	CADDON	15K	5%	1/4W	1002	1-243-423-11	CARDON	101	374	17 4 91
R215	1-249-421-11		2. 2K		1/4W	D8U3	1-249-425-11	CARRON	4. 7K	544	1/4 W
R216	1-249-429-11		10K	5%	1/4W	R804	1-249-405-11		100	5%	1/4 W
R217			2. 2K		1/4W	R805	1-249-403-11		100	5%	1/4 W
R218	1-249-421-11				1/4W		1-249-393-11				1/4 W
KOUI	-1-249-405-11	CARDON	100	376	1/4#	R807	1-249-433-11		22K	5%	1/4 W
DEAA	1 040 405 11	CADDON	100	5%	1/4W	1001	1-243-433-11	UNRBUN	221	374	1/ 401
R502	1-249-405-11		27K	5%	1/4W	R808	1-249-417-11	CARRON	1 K	5%	1/4 W
R503 R504	1-249-434-11		10K	5%	1/4W	R809	1-249-433-11		22K	5%	1/4 W
			470	5%	1/4W	R810	1-247-850-11		6. 2K		1/4 W
R505	1-249-413-11		24K	5%	1/4W	R811	1-249-433-11		22K	5%	1/4 W
R506	1-241-004-11	CARDON	24K	JA	17 411	R812	1-249-430-11		12K	5%	1/4₩
0510	1-249-429-11	CADDON	10K	5%	1/4W	1012	1-249-430-11	JANDON	128	V/8	() 491
R510					1/4W	R813	1-249-429-11	ADDON	10K	5%	1/4 W
R511	1-249-429-11		10K	5%			1-249-429-11			5%	1/4₩
R512	1-249-441-11		100K	5%	1/4W 1/4W	R814 R815	1-249-429-11		10K 27K	5%	1/4 W
R513	1-249-417-11		1K		1						1/4₩
R514	1-249-441-11	CARBUN	100K	376	1/4W	R816	1-249-429-11 (10K	5% 5%	
0545	* 040 407 44	CADDON	C 01	CP/	1 / 4 14	R818	1-249-434-11 (NUGAN	27K	5%	1/4₩
R515	1-249-427-11		6. 8K	5%	1/4W	pgtn	1_240 420 11 4	ADDON	107	5eV	.1/4 VN
R516	1-249-413-11		470	5%	1/4W	R819	1-249-429-11 (10K	5% 5%	1/4 W
R517	1-249-429-11		10K	5%	1/4W	R820	1-249-421-11 (2. 2K		1/4 W
R518	1-249-413-11		470	5%	1/4W	R821	1-249-421-11 (2. 2K		
R519	1-249-431-11	CARBUN	15K	5%	1/4W	R822	1-249-422-11 (hvonn	2. 7K	J/6	1/4/

MAIN PANEL CONTROL (A) CONTROL (B) MD-A

	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remar
R823	1-249-422-11		2. 7K	5%	1/4W	R910	1-249-409-11		220	5%	1/4W
						R911	1-249-411-11	CARBON	330	5%	1/4W
R824	1-249-422-11	CARBON	2. 7K	5%	1/4W	R912	1-249-413-11	CARBON	470		1/4W
R825	1-249-425-11		4. 7K		1/4W						
R826	1-249-433-11		22K	5%	1/4W	R913	1-249-415-11	CARBON	680	5%	1/4W
R827	1-249-429-11		10K	5%	1/4W	R914			1 K		1/4W
R828	1-249-413-11		470	5%	1/4W	R915			5. 6K		1/4W
11020		••••			•	R916			12K		1/4W
R829	1-249-411-11	CARBON	330	5%	1/4W	1	1-249-421-11		2. 2K		1/4W
R830	1-249-410-11		270	5%	1/4W			******		***	, ,,,
R831	1-249-410-11		270	5%	1/4W			< VARIABLE RE	SISTOR >		
R832	1-249-408-11		180	5%	1/4W				0,01011 /		
R833	1-249-410-11		270	5%	1/4W	RV101	1-241-630-11	RES. ADJ. CARI	RON 10K		
NOUS	1-243-410 71	UNII DUII	2.0	•	7, 311	1		RES. ADJ. CAR			
R834	1-249-410-11	CARRON	270	5%	1/4W	1	1 247 000 11	nco, noo, onn	20H 10K		
	1-249-408-11		180	5%	1/4W			< SWITCH >			
R835	1-249-410-11		270	5%	1/4W			V SHITTOIL >			
R836	1-249-410-11		330	5%	1/4W	\$901	1-579-378-11	SWITCH, SLIDE	(DIRECT	I O N Y	
R837			470K		1/4W	\$902		SWITCH, SLIDE			
R838	1-247-895-00	CARDON	4101	370	1/ 411	\$903		SWITCH. TACTI		,	
0000	1 047 005 00	CADDON	470K	584	1/4W	\$904		SWITCH, TACTIL		-	
R839	1-247-895-00		16K	5%	1/4W	\$905		SWITCH, TACTIO			
R840	1-247-860-11		15K	5%	1/4W	3303	1-334-303-21	SHITTON, INCITE	.c (A nc)	v <i>,</i>	
R841	1-249-431-11				1/4W	2006	1 554 202 21	CWITCH TACTIO	E /0 DEN	ıΛ	
R842	1-249-425-11		4. 7K		1/4W	\$906		SWITCH, TACTIL			
R843	1-247-862-11	CARBUN	20K	5%	1/4#	\$907			,		
		0.100011	004	F9/	1.740	\$908		SWITCH, TACTIL		•	
R844	1-247-862-11		20K	5%	1/4W	\$909		SWITCH. TACTIL			
R845	1-249-425-11		4. 7K		1/4W	\$910	1-554-303-21	SWITCH, TACTIL	F (DAR)	TORMAL S	SPEED)
R846	1-249-415-11		680	5%	1/4W				- (
R847	1-249-429-11		10K	5%	1/4W	\$911		SWITCH, TACTIL		•	
R848	1-249-415-11	CARBON	680	5%	1/4W	\$912		SWITCH, TACTIL			
						\$913		SWITCH, TACTIL			
R849	1-249-429-11		10K	5%	1/4W	\$914		SWITCH, TACTIL		•	
R850	1-249-429-11		10K	5%	1/4W	\$915	1-554-303-21	SWITCH, TACTIL	E (B RVS	3)	
R851	1-249-437-11		47K	5%	1/4W						
R852	1-247-866-11		30K	5%	1/4W	\$916		SWITCH, TACTIL	•		
R853	1-247-866-11	CARBON	30K	5%	1/4W	\$917		SWITCH, TACTIL			
						\$918	1-554-303-21	SWITCH, TACTIL	E (A FF)		
R854	1-249-437-11		47K	5%	1/4W						
R855	1-247-872-11	CARBON	51K	5%	1/4W			< VIBRATOR >			
R856	1-247-872-11	CARBON	51K	5%	1/4W						
R857	1-247-872-11	CARBON	51K	5%	1/4W	X801	1-577-358-21	VIBRATOR, CERA	MIC (4MH	z)	
R858	1-247-872-11	CARBON	51K	5%	1/4W	******	*********	*********	******	******	******
R859	1-249-405-11	CARBON	100	5%	1/4W	*	A-2006-399-A	MD-A BOARD, CO	MPLETF		
R860	1-249-405-11		100	5%	1/4W		"	********			
R899	1-249-393-11		10	5%	1/4W						
R901	1-249-407-11		150	5%	1/4W			< CAPACITOR >			
R902	1-249-409-11		220	5%	1/4W						
.,,,,,	. 2.2 ,				•	C11	1-163-131-00	CERAMIC CHIP	390PF	50	% 50°
R903	1-249-411-11	CARBON	330	5%	1/4W	C12	1-136-157-00		0. 022u		% 50'
R904	1-249-413-11		470	5%	1/4W	C13	1-124-234-00		22uF		0% 161
R905	1-249-415-11		680	5%	1/4W	C18	1-163-117-00		100PF	55	
R906	1-249-417-11		1 K	5%	1/4W	C21	1-163-131-00		390PF	55	
R907	1-249-417-11		1. 8K		1/4W	V21	, 100 101-00	VERNMIN VIIII	VJUII	3,	
1064	1-243-420-11	VANDVII	1. OK	V.	./ 711	C22	1-136-157-00	FILM	0. 022u	F 59	% 50V
Dava	1-249-424-11	CARRON	3. 9K	5%	1/4W	C23	1-124-234-00		22uF		% 36\ 0% 16\
R908	1-249-424-11		3. 3K 150	5%	1/4W	C28	1-163-117-00		100PF	59	
R909	1-149-401-11	CARDUN	130	JA	1/411	628	1-103-117-00	OCHAMIC CHIP	10077	57	n 3U\

MD-A MD-B

	Part No.	Description		Rem	ark	Ref. No.	Part No.	Description			mark	
C31 C32	1-124-234-00	ELECT	22uF 22uF		20% 20%	16V 16V	*	A-2006-400-A	MD-B BOARD, CO			
C72	1-124-499-11	ELECT. NONPOLAR	1uF		20%	50V			CADACITOD >			
		< CONNECTOR >							< CAPACITOR >			
							C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50 V
* CNJ31	1-580-782-11	CONNECTOR. BOAR	D TO BO	DARD			C12	1-136-157-00		0. 022uF	5%	50V
		SOCKET, CONNECT					C13	1-124-234-00	ELECT	22uF	20%	16V
		PIN. CONNECTOR		ARD) 4	Р		C14	1-136-273-91	FILM	75PF	5%	630V
* CNP71	1-564-719-11	PIN, CONNECTOR	(SMALL	TYPE)	3P		C15	1-164-080-11	CERAMIC	390PF	10%	50V
		< 10 >					C17	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
							C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
1031	8-759-106-02	IC uPC457062					C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
							C22	1-136-157-00	FILM	0.022uF	5%	50 V
		< CHIP JUMPER >					C23	1-124-234-00	ELECT	22uF	20%	16V
JW1	1-216-295-00	METAL CHIP	0	5%	1/10W		C24	1-136-273-91		75PF	5%	630V
JW51	1-216-296-00	METAL CHIP	0	5%	1/8W		C25	1-164-080-11		390PF	10%	50V
J₩52	1-216-296-00	METAL CHIP	0	5%	1/8W		C27	1-163-103-00		27PF	5%	50V
J W 53	1-216-296-00		0	5%	1/8W		C28	1-163-117-00		100PF	5%	50V
JW54	1-216-296-00	METAL CHIP	0	5%	1/8W		C31	1-124-234-00	FLECI	22uF	20%	16V
		< TRANSISTOR >					C32	1-124-234-00	ELECT	22uF	20%	16V
							C33	1-124-234-00	ELECT	22uF	20%	16V
071	8-729-602-36	TRANSISTOR 25/	A1602				C51	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
							C52	1-163-019-00		0.0068uF	10%	50 V
		< RESISTOR >					C53	1-163-022-00	CERAMIC CHIP	0.012uf	10%	50V
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W		C54	1-136-559-1.1	FILM	0.0047uF	5%	630V
R12	1-216-025-00	METAL CHIP	100	5%	1/10W		C56	1-164-505-11		2. 2uf		16V
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W		C57	1-164-346-11		1uF		16V
R14	1-216-067-00	METAL CHIP	5. 6K		1/10W		C58	1-163-024-00		0.018uF	10%	50 V
R21	1-216-099-00	METAL CHIP	120K	5%	1/10₩		C72	1-124-499-11	ELECT. NONPOLAR	1uF	20%	50 V
R 2 2	1-216-025-00		100	5%	1/10W				< CONNECTOR >			
R23	1-216-100-00		130K		1/10W							
R24	1-216-067-00		5. 6 K		1/10W	-			CONNECTOR, BOAR			
R31	1-216-033-00			5%	1/10W				CONNECTOR, BOAR SOCKET, CONNECT			
R32	1-216-033-00	MEIAL CHIP	220	5%	1/10W				PIN, CONNECTOR		Đ	
071	1-216-082-00	METAL CLATE	24K	5%	1/10W				PIN. CONNECTOR			
R71 R72	1-216-081-00			5%	1/10W		T VIII 11	1 004 115 11	i in, sounceion	(OMALE TITE)	•	
R73	1-216-089-00			5%	1/10W				< DIODE >			
R74	1-216-089-00			5%	1/10W							
11.7	1 210 000 00				,,		031	8-719-988-62	DIODE 188355			
		< VARIABLE RESIS	STOR >					,	< 10 >			
RV11	1-238-012-11	RES, ADJ. CARBON	I 1K									
RV21		RES. ADJ. CARBON					1031	8-759-106-02	IC uPC4570G2			
RV71		RES. ADJ. CARBON										
RV72		RES. ADJ. CARBON						•	CHIP JUMPER >			
******	******	******	*****	*****	*****	***						
							JW1	1-216-296-00		0 5%	1/8W	
							JW2	1-216-295-00		0 5%	1/10 W	
							JW3	1-216-295-00		0 5%	1/10 W	
							JW4	1-216-295-00	METAL CHIP	0 5%	1/10 W	

1-216-295-00 METAL CHIP

MD-B SW-A SW-B

					9	Daf No	Part No.	Description	Remark
Ref. No.	Part No.	Description			Remark 				
JW6	1-216-295-00	METAL CHIP	0	5%	1/10W			< VARIABLE RESISTOR >	
JW7	1-216-295-00		0	5%	1/10W				
JW52	1-216-296-00		0	5%	1/8W	RV11		RES, ADJ, CARBON 1K	
JW53	1-216-296-00		0	5%	1/8W	RV12		RES. ADJ. CARBON 220K	
JW54	1-216-296-00		0	5%	1/8W	RV21		RES. ADJ. CARBON 1K	
31134	1 210 200 00	WE THE				RV22		RES. ADJ. CARBON 220K	
INEE	1-216-296-00	METAL CHIP	0	5%	1/8W	RV71	1-238-016-11	RES. ADJ. CARBON 10K	
JW55	1-216-296-00		0	5%	1/8W				
J₩56	1-216-296-00		Û	5%	1/8W	RV72	1-238-016-11	RES. ADJ. CARBON 10K	
JW57	1-216-296-00		0	5%	1/8W				
J₩58	1-216-296-00		û	5%	1/8W			< RELAY >	
JW59	1-210-290-00	METAL OILI	•	074	.,				
JW60	1-216-296-00	METAL CHIP	0	5%	1/8W	RY31	1-515-726-11	RELAY	
JW61	1-216-296-00		0	5%	1/8W	1			
JMOI	1-210-230-00	INC THE OUT	-					< COIL >	
		< COIL >						COLL DIAC OCCULIATION	
						T51		COIL. BIAS OSCILLATION *************************	******
L11	1-410-780-11		27mH			******	*********	***************	*************
L21	1-410-780-11	INDUCTOR	27mH				1-634-841-14	CW_A ROARD	
						*	1-034-041-14	******	
		< TRANSISTOR	(>						
		DANCICTÓD	2SD1622-	.0			3-343-419-01	HOLDER (S SENSER A)	
Q51	8-729-808-01		2SD1622-						
Q52	8-729-808-01							< CONNECTOR >	
Q 5 3	8-729-808-01		2SD1622- 2SA1602	٠.٥					
Q71	8-729-602-36	IKANSISIUK	23M1002			* CNP81	1-568-852-11	SOCKET, CONNECTOR 9P	
		< RESISTOR :	>					< IC >	
		LUCTAL OHIO	120K	EW.	1/10W			(10)	
R11	1-216-099-00		100	5%	1/10W	1081	8-719-710-03	B DIODE NJL5165K-8	
R12	1-216-025-00				1/10W	1001			
R13		METAL GLAZE	130K		· .			< RESISTOR >	
R14	1-216-067-0		5. 6K		1/10W				
R15	1-249-430-1	1 CARBON	12K	5%	1/4W	R84	1-249-417-1	I CARBON 1K 55	6 1/4W
			4001	F0/	1 /1014	R85	1-249-408-1		6 1/4W
R21	1-216-099-0	METAL CHIP	120K		1/10W	400	1-243 400 1	, online in	
R22	1-216-025-0		100	5%	1/10W			< SWITCH >	
R23		O METAL GLAZE	130K		1/10W			CONTION >	
R24		O METAL CHIP	5. 6K		1/10W	201	1 671 060 1	1 SWITCH, PUSH (1 KEY) (ST	ופו
R25	1-249-430-1	1 CARBON	12K	5%	1/4W	1	1-0/1-900-1	1 SWITCH, LEAF (70EQ)	,, ,
						\$82		1 SWITCH, LEAF (HALF)	
R31	1-216-033-0	O METAL CHIP	220	5%	1/10W	\$86	1-5/1-281-2	1 SMITCH, LENE (HARE)	
R32		O METAL CHIP	220	5%	1/10W	******	*********	*********	******
R41	1-249-393-1		10	5%	1/4W	1		4 AND B BAARS	
R42	1-249-393-1		10	5%	1/4W	*	1-634-841-1	4 SW-B BOARD	
R51		O METAL CHIP	12K	5%	1/10W			******	
							2 242 410 0	1 HOLDER (S SENSER A)	
R52		O METAL CHIP	12K	5%	1/10W		3-345-419-0	I HOLDER (9 SENSER A)	
R53	1-216-073-0	O METAL CHIP	10K	5%	1/10W	}		CONNECTOD	
R54	1-216-309-0	0 METAL CHIP	5. 6	5%	1/10W	alan alan alan alan alan alan alan alan		< CONNECTOR >	
R55	1-216-309-0	O METAL CHIP	5. 6	5%	1/10W	1		. ASSET ASSESSAD AD	
R56		O METAL CHIP	2. 2	5%	1/10W	* CNP81	1-568-852-1	1 SOCKET. CONNECTOR 9P	
			. 644	E EV	1/10₩			< IC >	
R71		8 METAL GLAZE		5%	1/10W				
R72		O METAL CHIP	22K	5%	1/10W	1081	8-719-710-0	3 DIODE NJL5165K-B	
		A METAL CHID	47K	5%	1/10W	1 1601	0-113-110-0	O DIABL HATAIAAN O	
R73		0 METAL CHIP	47K	5%	1/10W				

SW-B

Ref. No.	Part No.	Descrip	tion			Remar
		< RESIS	TOR >			
R81	1-249-414-11	CARBON		560	5%	1/4W
R82	1-247-818-11	CARBON		300	5%	1/4W
R83	1-247-834-11	CARBON		1. 3K	5%	1/4W
R84	1-249-417-11	CARBON		1 K	5%	1/4W
R85	1-249-408-11	CARBON		180	5%	1/4W
		< SWITC	H >			
\$81	1-571-958-11	SWITCH.	PUSH	(1 KEY)	(STOP)	
\$82	1-571-281-21	SWITCH.	LEAF	(70EQ)		
\$83	1-571-281-21	SWITCH.	LEAF	(METAL)		
\$84	1-571-281-21	SWITCH,	LEAF	(REC A)		
\$85	1-571-281-21	SWITCH,	LEAF	(REC B)		
\$86	1-571-281-21	SWITCH,	LEAF	(HALF)		
	******				*****	k********

MISCELLANEOUS

57 1-590-237-11 WIRE. FLAT TYPE (19 CORE)

- M901A X-3359-417-1 MOTOR ASSY (CAPSTAN) (DECK A)
 M901B X-3359-417-1 MOTOR ASSY (CAPSTAN) (DECK B)
 M902A X-3363-501-1 MOTOR ASSY (REEL) (DECK A)
 M902B X-3363-501-1 MOTOR ASSY (REEL) (DECK B)

ACCESSORIES & PACKING MATERIALS

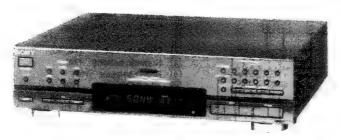
* 3-350-154-01 CUSHION 4-920-940-01 SHEET (A). PROTECTION

HARDWARE LIST

#1 7-685-646-79 SCREW +BVTP 3X8 TYPE2 N-S #2 7-685-645-79 SCREW +BVTP 3X6 TYPE2 N-S #3 7-621-773-93 SCREW (PANEL 2.6 TP2) #4 7-621-775-00 SCREW +B 2.6X3 #5 7-627-556-08 SCREW +P 2.6X2.8

SERVICE MANUAL

AEP Model UK Model East European Model



• This set is the TUNER section in LBT-D507/D607/D707.

SPECIFICATIONS

System

FM tuner section
Tuning range
Antenna
Intermediate frequency
AM tuner section
Tuning range

Antenna

Intermediate frequency

FM stereo

450 kHz

FM/AM superheterodyne tuner

87.5 to 108 MHz 75 ohms unbalanced 10.7 MHz

MW: 531 to 1,602 kHz LW: 153 to 279 kHz AM loop antenna External antenna terminal Power requirements Power consumption AC outlet Weight

Dimensions

240 V AC, 50/60 Hz
10 W
2 switched, total 450 W max
Approx. 2.7 kg (6 lbs 5 oz)
Approx. 355 x 95 x 310 mm
(14 x 3³/x 12¹/x inches)
(w/h/d, including projections)

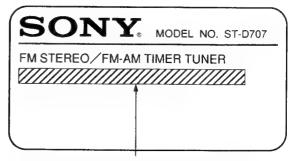
Design and specifications are subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

MODEL IDENTIFICATION

- Model Number Portion -



AEP, East European model : AC : 220-230V \sim 50/60Hz UK model : AC : 240V \sim 50/60Hz

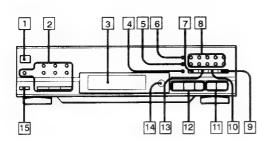




SECTION 1 GENERAL

This section is extracted from instruction manual.

Location of Controls



1 SYSTEM POWER switch (8)
2 Buttons for setting the clock and timer (40, 42)
3 Display window
4 MEMORY button (14)
5 MEMORY SCAN button (16)
6 AUTO TUNING button (12)
7 DISPLAY button (16, 40)
8 Numeric buttons (14)
9 BAND selector (12)
10 ST/MUTE button (12)
11 TUNING +/- buttons (12)
12 SHIFT buttons (A, B, C) (14)
13 CHARACTER button (15)
14 Remote sensor
15 SLEEP button (41)

71

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK A OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

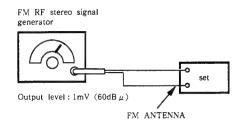
SECTION 2 ELECTRICAL ADJUSTMENTS

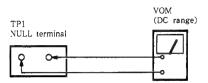
FM SECTION

Carrier frequency	98MHz
Modulation	MONO: IkHz, 40kHz deviation
	STEREO: Audio 1kHz, 16,25kHz deviation
	Pilot 19kHz, 7.5kHz deviation
	Sub-carrier 38kHz, 16,25kHz deviation

• FM Discriminator Alignment (NULL check)

Setting:





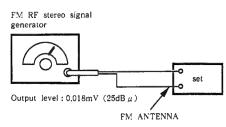
Procedure:

- 1. Tune the set to 98MHz.
- 2. Adjust T21 for OV reading on the VOM.

Note: FM tuning level adjustment should be made after FM discriminator alignment,

• FM Tuning Level Adjustment

Setting:

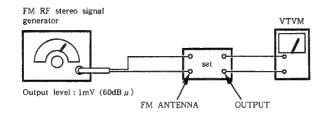


Procedure:

- 1. Tune the set to 98MHz.
- 2. Adjust RV24 so that the TUNED LED goes on.

• FM Stereo Separation Adjustment

Setting:



Procedure:

Tune the set to 98MHz

FM stereo Signal generator Output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	A
R-CH	L-CH	Adjust RV21 for minimum reading.
R-CH	R-CH	0
L-CH	R-CH	Adjust RV21 for minimum reading,

L-CH Stereo separation: (A) — (B)
R-CH Stereo separation: (C) — (D)

The separations of both channels should be equal.

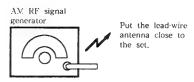
AM SECTION

• AM Tuning Level Adjustment

Setting:

BAND selector: LW

Procedure:



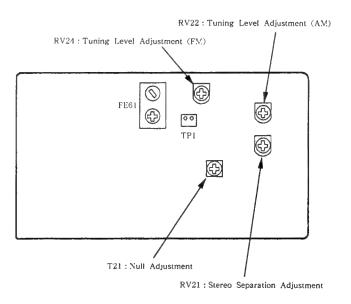
Carrier frequency: 216kHz

30% amplitude modulation by 400Hz signal Output level : 68dB μ

- 1. Tune the set to 216kHz
- 2. Adjust the RV22 so that the TUNED LED goes on,

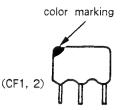
Parts Arrangement Diagram for Adjustments

-tuner board-



Note on Ceramic Filter (CF1, 2) Replacement.

This set employs three ceramic filters (CF1, 2) which should have the same color marking to identify their center frequency, Therefore FM IF offset adjustment by D708, D709 mounted is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



○: Mounted ×: not Mounted

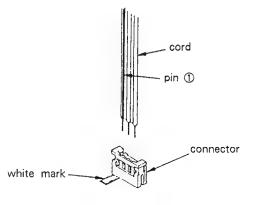
3-1.

Cer	ramic filter	Мо	unt	FM intermediate
Color	Center frequency (MHz)	* A	*B	frequency
mark		D708	D709	(MHz)
White	10.750	×	0	10.750
Red	10.700	0	0	10.700
Black	10.650	0	×	10.650

FM intermediate frequency is determined by the three types as shown above. Ceramic filters of same center frequency, i. e., of same color coding should be used for CF1 and CF2. When replacing the ceramic filters, perform the FM Discriminator Adjustment.

[Note on Inserting the Cord to the Connector on Tuner Board]

• Insert the cord to the connector fitting Pin ① of the cord in accordance with the white mark on the board at the connector as shown in the figure.



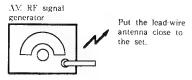
AM SECTION

• AM Tuning Level Adjustment

Setting:

BAND selector: LW

Procedure:



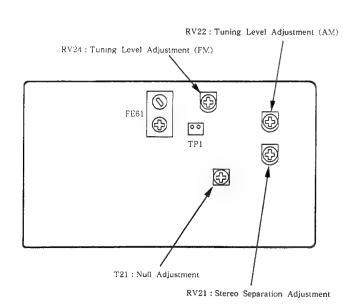
Carrier frequency: 216kHz

30% amplitude modulation by 400Hz signal Output level: 68dB μ

- 1. Tune the set to 216kHz
- 2. Adjust the RV22 so that the TUNED LED goes on.

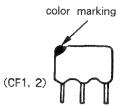
Parts Arrangement Diagram for Adjustments

-tuner board-



Note on Ceramic Filter (CF1, 2) Replacement.

This set employs three ceramic filters (CF1, 2) which should have the same color marking to identify their center. frequency, Therefore FM IF offset adjustment by D708, D709 mounted is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



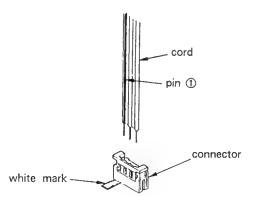
O: Mounted ×: not Mounted

Ce	ramic filter	Мо	unt	FM intermediate
Color mark	Center frequency (MHz)	* A D708	*B D709	frequency (MHz)
White Red Black	10,750 10,700 10,650	× 0 0	0 0 ×	10,750 10,700 10,650

FM intermediate frequency is determined by the three types as shown above. Ceramic filters of same center frequency, i. e., of same color coding should be used for CF1 and CF2. When replacing the ceramic filters, perform the ${\rm FM}$ Discriminator Adjustment.

[Note on Inserting the Cord to the Connector on Tuner Board]

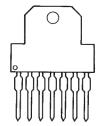
• Insert the cord to the connector fitting Pin (1) of the cord in accordance with the white mark on the board at the connector as shown in the figure.



SECTION 3 DIAGRAMS

3-1. SEMICONDUCTOR LEAD LAYOUTS

LA5667



2SA1175-HFE 2SC2785-HFE



2SB1116A-L



2SC2603-EF 2SC2669-0Y 2SC3113-AB DTA114ES DTC114ES DTC124ES



2SK246-GR3



1N4148M 10E2N



HZS30-2L UZP-5.6B



VTVM

reading (dB)

(A)

(B)

Adjust RV21 for

minimum reading.

0

Adjust RV21 for

minimum reading.

be equal.

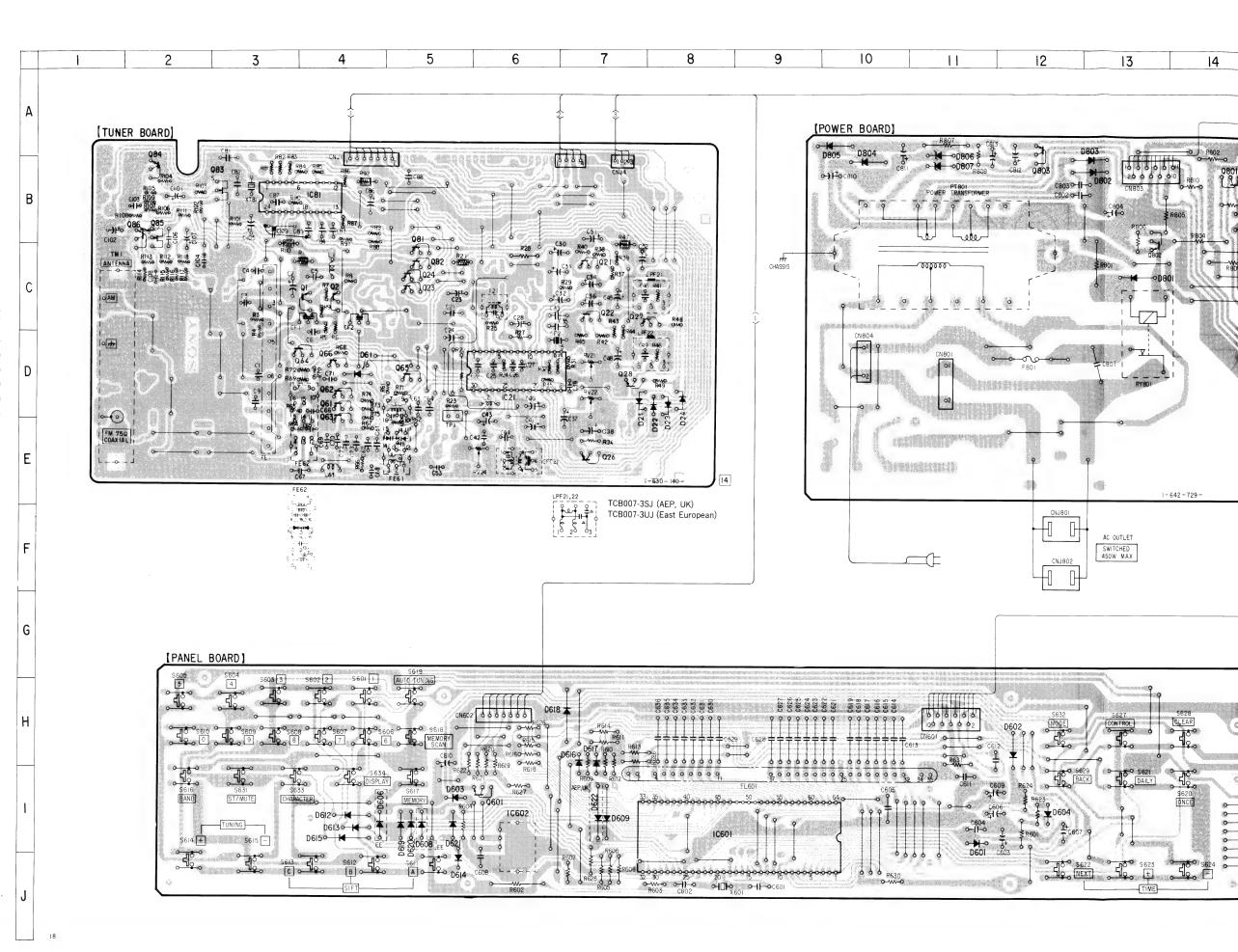
3-2. PRINTED WIRING BOARDS

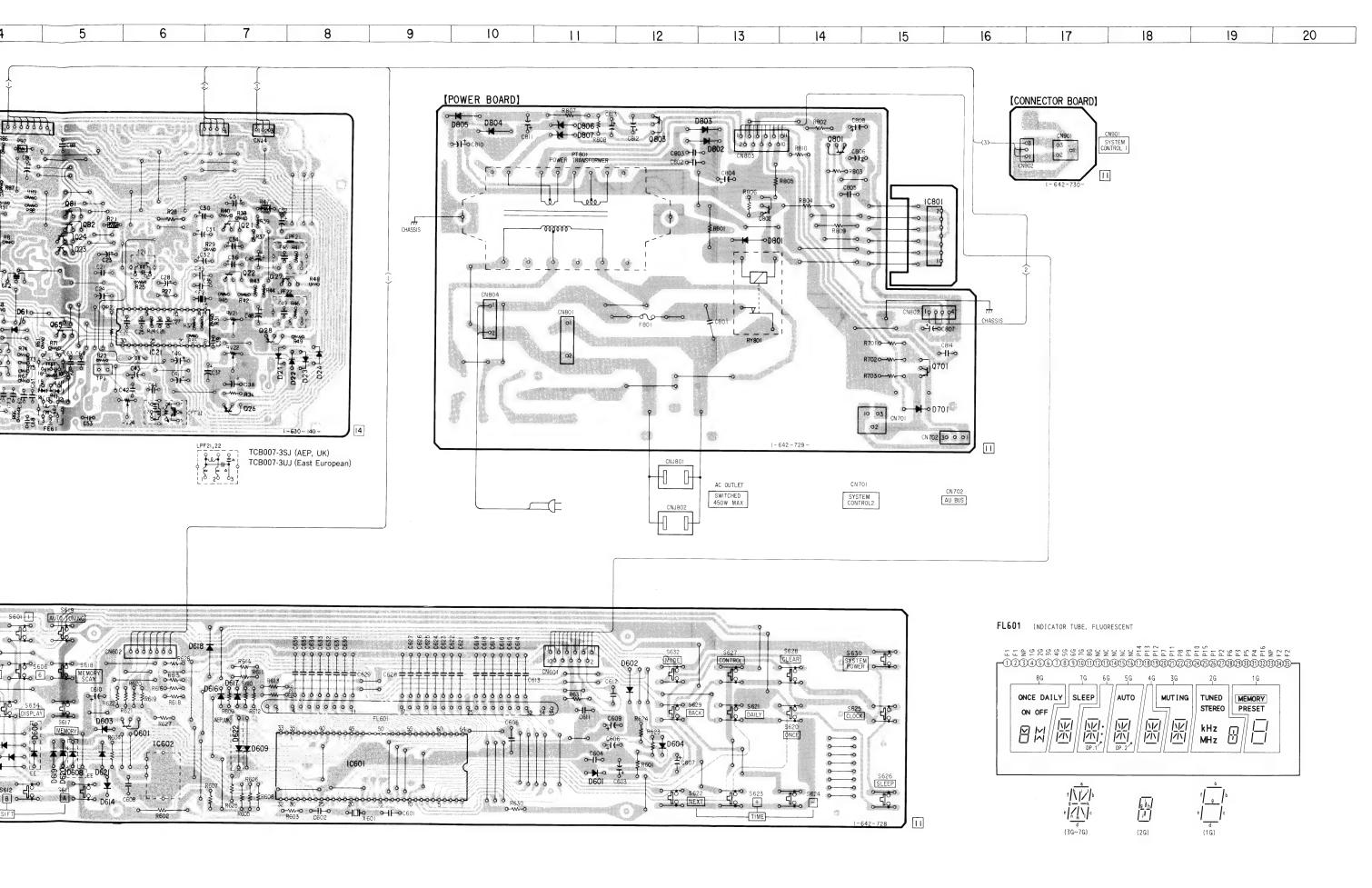
Semiconductor Location

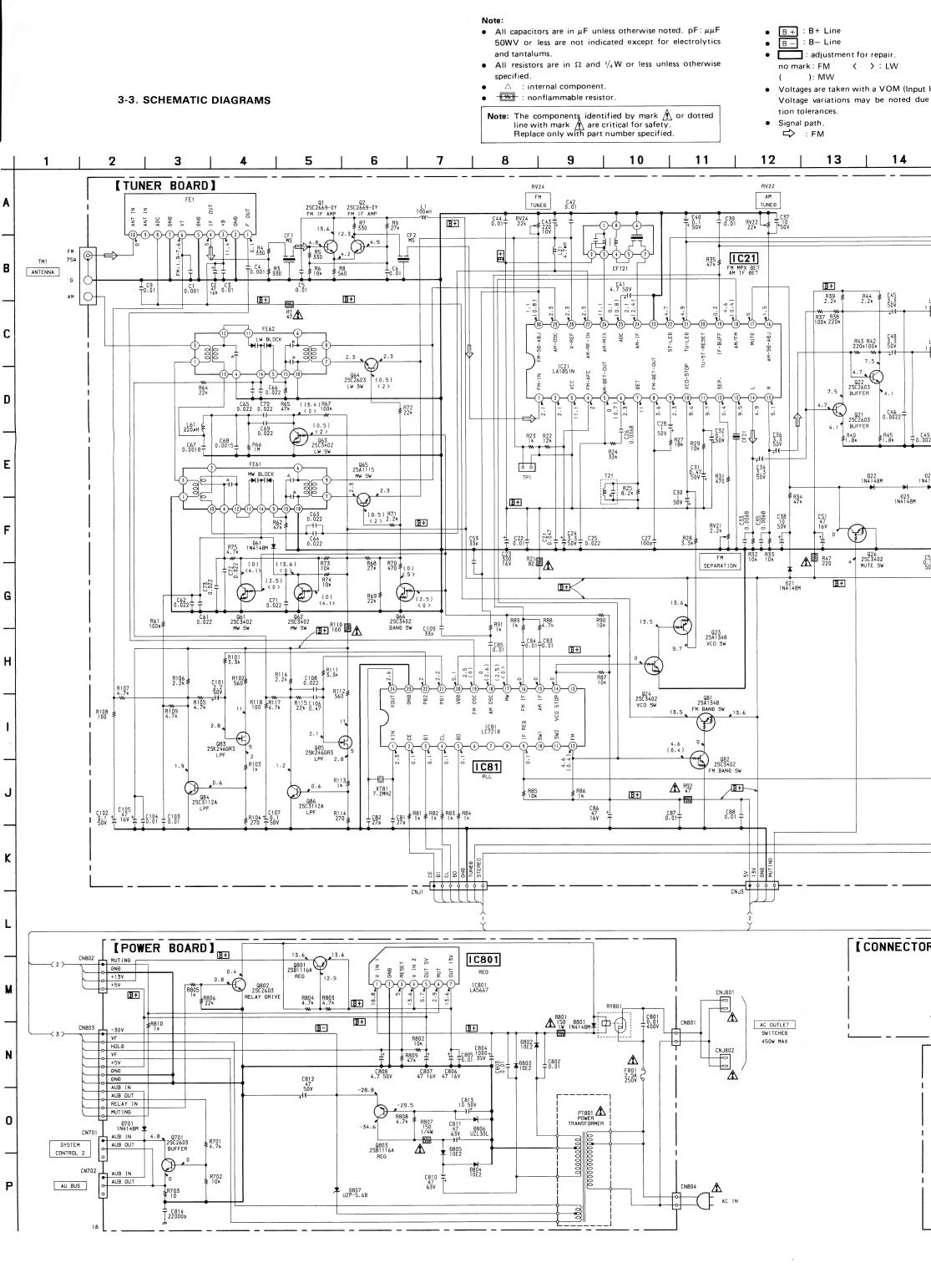
Note:

• o---: parts extracted from the component side.

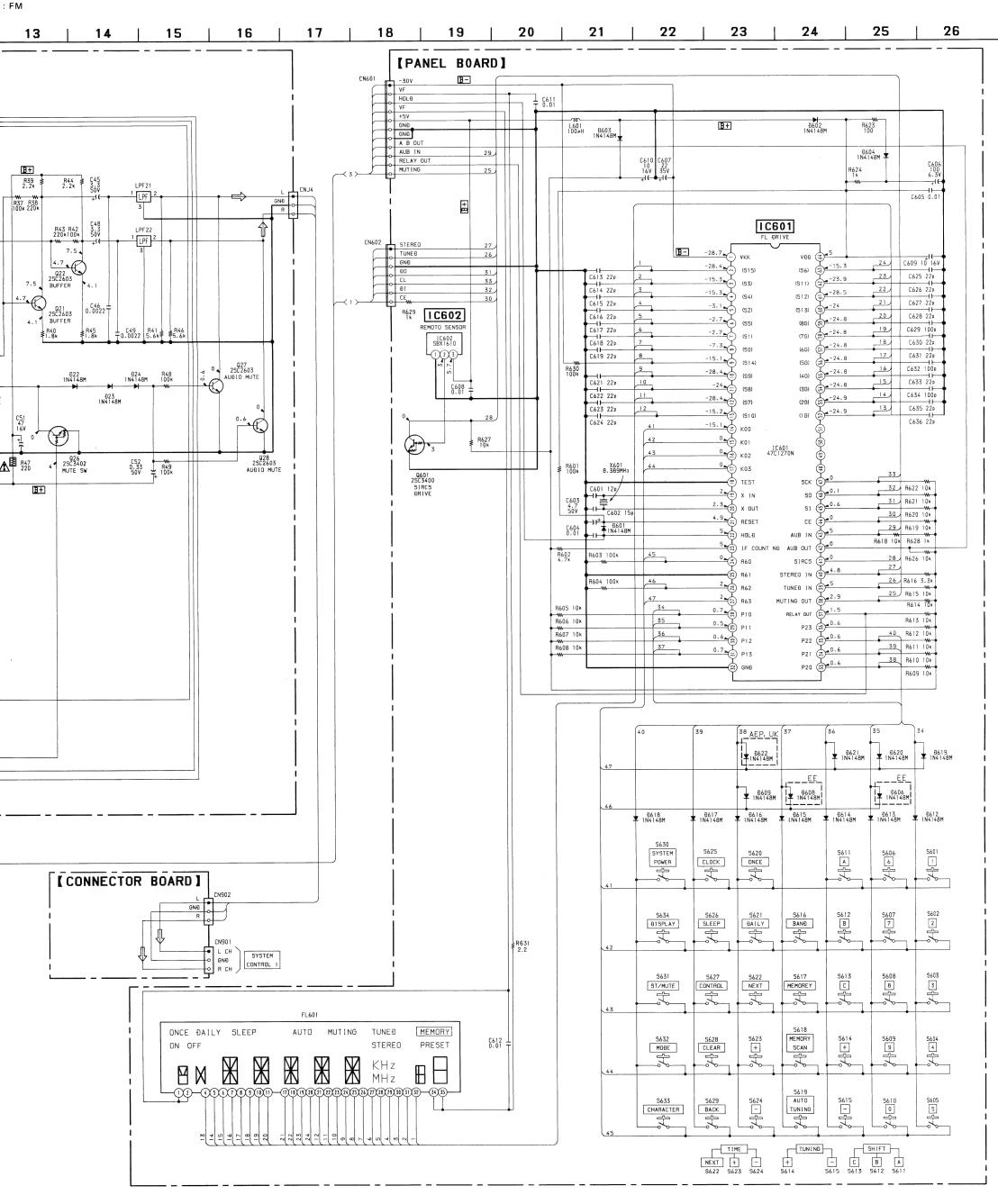
: parts mounted on the conductor side.

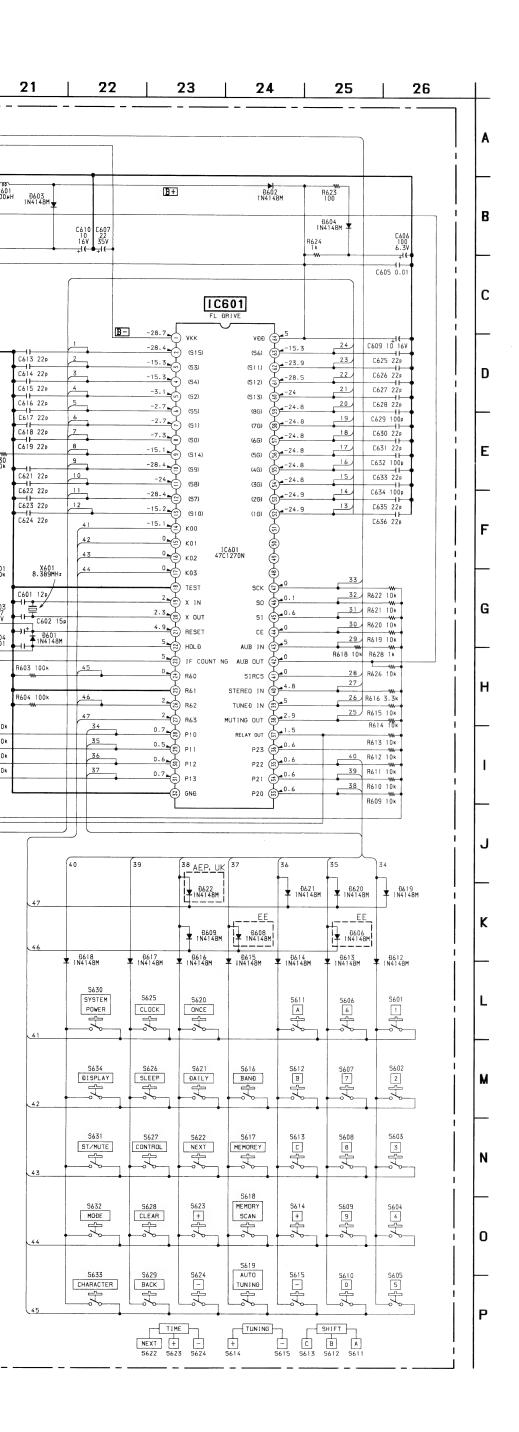






: B+ Line
: B- Line
: adjustment for repair.
rk: FM 〈 〉: LW
): MW
les are taken with a VOM (Input Impedance 10MΩ).
le variations may be noted due to normal produclerances.
path.
FM





IC Block Diagrams

V [N 1

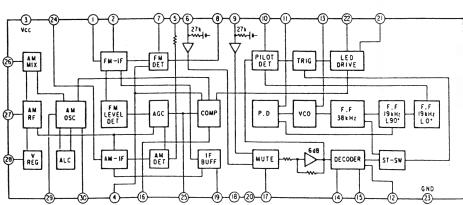
V IN 2 (4

GND (

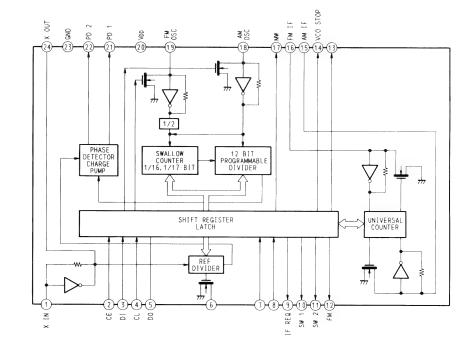
CURRENT LIMITER REG. W THERMAL SHUT DOWN CURRENT LIMITER REG. W S G S G G THERMAL SHUT T

IC801 LA5667





IC81 LC7218



SECTION 4 EXPLODED VIEWS

- · -XX, -X mean standardized parts, so they may have some differences from the original one
- · Color Indication of Appearance Parts Example:

KNOB, BALANCE(WHITE)...(RED)

Parts color Cabinet's color

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- · hardware (#mark) list is given in the last of this parts list.

The components identified by mark \(\hat{\hat{\hat{O}}}\) or dotted line with mark \(\hat{\hat{\hat{A}}}\) are critical for safety. Replace only with part number

EE: East European Model

CNJ801 CNJ802 UK model not supplied not supplied 16 not supplied not supplied

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4942-442-1	PÁNEL ASSY (507), FRONT		<u>A</u> 10	1-575-651-11	CORD, POWER (AEP, EE)	
		(FOR LBT-D507; AEP, UK, EE)		<u> 10</u>		CORD, POWER (UK)	
1	X-4942-445-1	PANEL ASSY (607), FRONT		* 11		CONNECTOR BOARD	
		(FOR LBT-D607; AEP, UK)		* 12	4-949-235-01	HOOK	
2	1-575-666-11	WIRE, FLAT TYPE (11 CORE)		* 13	A-4347-288-A	TUNER BOARD, COMPLETE (AEP, UK)	
* 3	A-4347-291-A	PANEL BOARD, COMPLETE (AEP)		* 13	A-4347-290-A	TUNER BOARD, COMPLETE (EE)	
k 3	A-4347-292-A	PANEL BOARD, COMPLETE (UK)		* 14		HOLDER, PC BOARD	
k 3	A-4347-294-A	PANEL BOARD, COMPLETE (EE)		15	9-911-849-XX	CUSHION	
‡ 4	A-4347-277-A	POWER BOARD, COMPLETE (AEP. 1	EE)	16	4-931-169-01	FOOT	
* 4	A-4347-278-A	POWER BOARD, COMPLETE (UK)		 ♣F801	1-532-286-00	FUSE, TIME-LAG	
k 5	3-349-025-31	HOLDER, PC BOARD		⚠ PT801	1-449-979-11	TRANSFORMER, POWER	
6	3-363-099-01	SCREW (CASE +3X8 TP2)		Α.		OUTLET, AC (AEP, EE)	
* 7	4-939-802-31	CASE		Α.		OUTLET, AC (AEP, EE)	
ŧ 8	4-950-668-11	PANEL, BACK (AEP, EE)		 ⚠ CNJ801	1-526-751-00	OUTLET, AC (UK)	
8	4-950-668-21	PANEL, BACK (UK)		⚠ CNJ802	1-526-751-00	OUTLET, AC (UK)	
k 9	3-703-244-00	BUSHING (2104), CORD					

SECTION 5 ELECTRICAL PARTS LIST

PANEL POWER

CONNECTOR

NOTE:

- · Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- · -XX, -X mean standardized parts, so they may have some differences from the original one.
- RESISTORS All resistors are in ohms METAL:Metal-film resistor METAL OXIDE:Metal Oxide-film resistor F:nonflammable
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS In each case, $u:\mu$, for example: uA...: μA..., uPA...: μPA..., uPB...: μPB..., uPC...: μPC..., uPD...: μPD...
- CAPACITORS uF: μF
- · COILS uH: μH

When indication parts by reference number, please include the board name.

The components identified by mark or dotted line with mark A are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
· 		PANEL BOARD,	COMPLETE (E	EE)		C621	1-162-207-31	CERAMIC	22PF	5%	50V
ŧ	A-4347-292-A	PANEL BOARD,	COMPLETE (L	JK)							
ŧ	A-4347-291-A	PANEL BOARD,	COMPLETE (A	AEP)		C622	1-162-207-31	CERAMIC	22PF	5%	50V
		*******	*******	***		C623	1-162-207-31	CERAMIC	22PF	5%	50V
						C624	1-162-207-31	CERAMIC	22PF	5%	50V
k	A-4347-278-A	POWER BOARD,	COMPLETE (L	JK)		C625	1-162-207-31	CERAMIC	22PF	5%	50V
ŧ	A-4347-277-A	POWER BOARD.	COMPLETE (A	AEP, EE)		C626	1-162-207-31	CERAMIC	22PF	5%	50V
		*********	********	*****							
						C627	1-162-207-31	CERAMIC	22PF	5%	50 V
		CONNECTOR BOX	ARD			C628	1-162-207-31	CERAMIC	22PF	5%	50 V
		********	** *			C629	1-162-282-31	CERAMIC	100PF	10%	50V
						C630	1-162-207-31	CERAMIC	22PF	5%	50V
4	4-921-941-01	CUSHION (FL)				C631	1-162-207-31	CERAMIC	22PF	5%	50 V
£	4-923-103-01	HOLDER, FL TU	J8E								
						C632	1-162-282-31	CERAMIC	100PF	10%	50 V
		< CAPACITOR 3	>			C633	1-162-207-31	CERAMIC	22PF	5%	50V
						C634	1-162-282-31	CERAMIC	100PF	10%	50 V
C601	1-162-201-31	CERAMIC	12PF	5%	50V	C635	1-162-207-31	CERAMIC	22PF	5%	50V
C602	1-162-203-31	CERAMIC	15PF	5%	50V	C636	1-162-207-31	CERAMIC	22PF	5%	50V
C603	1-126-163-11	ELECT	4. 7uF	20%	50V						
C604	1-164-096-11	CERAMIC	0.01uF		50V	C801	1-161-744-00	CERAMIC	0.01uF		400V
C605	1-161-379-00	CERAMIC	0. 01uF	20%	25V	C802	1-101-004-00	CERAMIC	0.01uF		50V
						C803	1-101-004-00	CERAMIC	0.01uF		50 V
C606	1-126-177-11	ELECT	100uF	20%	10V	C804	1-126-105-11	ELECT	1000uF	20%	35V
C607	1-124-916-11	ELECT	22uF	20%	63V	C805	1-164-096-11	CERAMIC	0.01uF		50 V
C608	1-164-096-11	CERAMIC	0. 01uF		50V						
C609	1-126-157-11	ELECT	10uF	20%	16V	C806	1-126-022-11	ELECT	47uF	20%	16V
C610	1-126-157-11	ELECT	10uF	20%	16V	C807	1-126-022-11	ELECT	47uF	20%	16V
						C808	1-126-163-11	ELECT	4. 7uF	20%	50 V
C611	1-164-096-11	CERAMIC	0.01uF		50V	C810	1-124-918-11	ELECT	47uF	20%	63V
C612	1-164-096-11	CERAMIC	0.01uF		50V	C811	1-124-918-11	ELECT	47uF	20%	63V
C613	1-162-207-31	CERAMIC	22PF	5%	50V						
C614	1-162-207-31	CERAMIC	22PF	5%	50V	C812	1-124-910-11	ELECT	47uF	20%	50V
C615	1-162-207-31	CERAMIC	22PF	5%	50V	C813	1-126-059-11	ELECT	10uF	20%	50V
						C814	1-162-596-11	CERAMIC	0. 022uF		50V
C616	1-162-207-31	CERAMIC	22PF	5%	50V						
C617	1-162-207-31	CERAMIC	22PF	5%	50V	1		< CONNECTOR >			
C618	1-162-207-31	CERAMIC	22PF	5%	50V						
C619	1-162-207-31	CERAMIC	22PF	5%	50V	* CN601	1-568-854-11	SOCKET, CONNE	CTOR 11P		
						* CN602	1-568-273-11	SOCKET. CONNE	CTOR 7P		

FL601 1-519-728-11 !N The components ident A are critical for safety Replace only with part

specified.

Ref. No. Part No.

* CN702 1-565-561-11 P

* CN802 1-568-308-11 SC

* CN803 1-568-830-11 St

* CN804 1-564-321-00 P

* CN901 1-569-625-41 St

CN902 1-568-269-11 Se

D601 8-719-987-63 D D602 8-719-987-63 D D603 8-719-987-63 D D604 8-719-987-63 D D606 8-719-987-63 D

D608 8-719-987-63 D

D609 8-719-987-63 D D612 8-719-987-63 D D613 8-719-987-63 D D614 8-719-987-63 DI

D615 8-719-987-63 D D616 8-719-987-63 DI D617 8-719-987-63 DI D618 8-719-987-63 DI D619 8-719-987-63 D1

D620 8-719-987-63 D1

D802 8-719-200-77 DI D803 8-719-200-77 DI

D804 8-719-200-77 DI

D805 8-719-200-77 DI D806 8-719-934-22 DI

D807 8-719-014-66 DI

<u>↑</u>F801 1-532-286-00 FU

* FH801 1-533-213-31 HO * FH802 1-533-213-31 HO

8-719-987-63 DI D622 8-719-987-63 DI D701 8-719-987-63 D1 D801 8-719-987-63 DI

D621

CN801 1-535-139-00 B

PANEL POWER CONNECTOR

Ref. No.	Part No.	Description	Remark	Ket. No.	Part No.	Description			Rem
* CN702	1-565-561-11	PIN, CONNECTOR 3P				< 1C >			
		BASE POST 22MM (10MM PITCH)	2 P						
				IC601	8-7,59-053-98	IC TMP47C1	270AN-H20	4	
k CN802	1-568-308-11	SOCKET, CONNECTOR 4P		10602	8-741-100-48	IC SBX1610	-59		
		SOCKET, CONNECTOR 11P		1 C 8 O 1	8-759-820-09	IC LA5667			
		PIN, CONNECTOR 2P							
		SOCKET, CONNECTOR 3P				< TRANSFORME	R >		
CN902	1-568-269-11	SOCKET, CONNECTOR 3P							
				PT801	1-449-979-11	TRANSFORMER,	POWER		
		< DIODE >				Z TOANGICTOR			
0601	0 710 007 69	DIODE 1N4148M				< TRANSISTOR	,		
D601 D602	8-719-987-63 8-719-987-63			Q601	8-729-900-36	TRANSISTOR	DTC124ES		
D603	8-719-987-63			Q701	8-729-620-05		2SC2603-		
D604	8-719-987-63			Q801	8-729-140-04		2SB1116A		
D606	8-719-987-63			Q802	8-729-620-05		2SC2603-		
5500	5 113 301 00	5.556		Q803	8-729-140-04		2SB1116A		
D608	8-719-987-63	DIODE 1N4148M (EE)			,				
D609	8-719-987-63					< RESISTOR >			
D612	8-719-987-63	DIODE 1N4148M							
D613	8-719-987-63	DIODE 1N4148M		R601	1-249-441-11	CARBON	100K	5%	1/4W
D614	8-719-987-63	DIODE 1N4148M		R602	1-249-429-11	CARBON	10K	5%	1/4W
				R603	1-249-441-11		100K	5%	1/4W
D615	8-719-987-63	DIODE 1N4148M		R604	1-249-441-11		100K	5%	1/4W
D616	8-719-987-63			R605	1-249-429-11	CARBON	10K	5%	1/4W
D617	8-719-987-63								4.4400
D618	8-719-987-63			R606	1-249-429-11		10K	5%	1/4W
D619	8-719-987-63	DIODE 1N4148M		R607	1-249-429-11		10K	5%	1/4W
	. 740 007 00	D1005 4N4440N		R608	1-249-429-11		10K	5%	1/4W
D620	8-719-987-63			R609 R610	1-249-429-11 1-249-429-11		10K 10K	5% 5%	1/4W 1/4W
D621	8-719-987-63			NOTO	1-249-429-11	CARBON	101	376	1/ 411
D622 D701	8-719-987-63 8-719-987-63			R611	1-249-429-11	CARRON	10K	5%	1/4W
D801	8-719-987-63			R612	1-249-429-11		10K	5%	1/4W
0001	0 113 301 00	7177011		R613	1-249-425-11		4. 7K	5%	1/4W
D802	8-719-200-77	DIODE 10E2N		R614	1-249-429-11		10K	5%	1/4W
D803	8-719-200-77			R615	1-249-429-11		10K	5%	1/4W
D804	8-719-200-77								
D805	8-719-200-77	DIODE 10E2N		R616	1-249-423-11	CARBON	3. 3K	5%	1/4W
D806	8-719-934-22	DIODE HZS30-2L		R618	1-249-417-11	CARBON	1K	5%	1/4W
				R619	1-249-429-11	CARBON	10K	5%	1/4W
D807	8-719-014-66	DIODE UZP-5.6B		R620	1-249-429-11	CARBON	10K	5%	1/4W
				R621	1-249-429-11	CARBON	10K	5%	1/4W
		< FUSE >							
				R622	1-249-429-11		10K	5%	1/4W
<u>∱</u> F801	1-532-286-00	FUSE, TIME-LAG (2.5A/250V)		R623	1-249-405-11		100	5%	1/4W
		- FUAF HALBER		R624	1-249-417-11		1 K	5%	1/4W
		< FUSE HOLDER >		R625	1-249-441-11		100K		1/4W
, FHQ01	1_533_010_01	HOLDER, FUSE		R626	1-249-429-11	VARDUN	10K	5%	1/4W
		HOLDER, FUSE		R627	1-249-429-11	CARRON	10K	5%	1/4W
r 110VZ	1 000-210-31	HOLDER, 100E		R628	1-249-429-11		1 K	5%	1/4W
		< FLUORESCENT INDICATOR >		R629	1-249-417-11		1 K	5%	1/4W
		T LEGOREOUTH HUTORION /		R630	1-249-441-11		100K		1/4W
F1 601	1-519-728-11	INDICATOR TUBE, FLUORESCENT		R631	1-249-421-11		2. 2	5%	1/4W
1 2001	1 013 120 11	, autonion ioue, levonevoent		R701	1-249-425-11		4. 7K		1/4W
				R702	1-249-429-11		10K	5%	1/4W
The c	omponents is	dentified by		R703	1-249-393-11		10	5%	1/4W
mark .	/v∖ Or dotted li	ne with mark ety. part_number	,		11			•	,

eference e board name.

ified by vith mark number

> Remark -----5% 50V

> > 50 V 50V

50 V

50V

50V

50V

50 V

50V

50 V

50 V

50V

50V

50V

400V 50V 50V 20% 35V 50 V

10% 50V 5% 50V 10%

20% 16V 20%

20% 50V 20% 50V 50V

16V 20% 50V 20% 63V 20% 63V

5% 5%

5%

5%

5%

5%

5%

10%

5%

5%

5%

5%

specified.

PANEL POWER CONNECTOR

Dof No	Part No.	Description				Remark	Ref. No.	Part No.	Description			Remark
Ket. No.												nemark
<u></u> ₹ R801	1-215-864-00	METAL OXIDE	150	5%	1₩		\$634	1-554-303-21	SWITCH, TACTIL	E (DISPLAY)		
	1-249-429-11		10 K	5%	1/4W							
R803	1-249-425-11	CARBON	4. 7K	5%	1/4W				< CRYSTAL >			
R804	1-249-425-11	CARBON	4. 7K	5%	1/4W		X601	1-579-564-11	VIBRATOR, CRYS	TAL (8.389M	Hz)	
R805	1-249-417-11	CARBON	1K	5%	1/4W		******	********	********	*******	****	******
R806	1-249-433-11	CARBON	22K	5%	1/4W							
<u></u> ₹807	1-247-702-11	CARBON	150	5%	1/4W		*	A-4347-290-A	TUNER BOARD, C	OMPLETE (EE)	
R808	1-249-425-11	CARBON	4. 7K	5%	1/4W		*	A-4347-288-A	TUNER BOARD, C	•		
R809	1-249-437-11	CARBON	47K	5%	1/4W							
R810	1-249-417-11		1 K	5%	1/4W			1-589-204-11	TUNER BOARD (A	EP, EE, UK)		
							*	4-924-988-11	PLATE (ST), GR	OUND		
		< RELAY >							< CAPACITOR >			
RY801	1-515-617-11	RELAY										
							C1	1-162-294-31	CERAMIC	1000PF	20%	25V
		< SWITCH >					C2	1-124-477-11		47uF	20%	25V
			4.1				C3		CERAMIC CHIP	0.01uF	20%	16V
•		SWITCH, TACTILE					C4	1-162-294-31		1000PF	20%	25V
\$602		SWITCH, TACTILE					C5	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V
		SWITCH, TACTILE	- 1					4 400 050 00	AEDAMIA AUID	0 04 5	0.00/	4.014
		SWITCH, TACTILE					C6		CERAMIC CHIP	0. 01uF	20%	16V
\$605	1-554-303-21	SWITCH, TACTILE	(5)				C9	1-163-059-00	CERAMIC CHIP	0. 01uF	20%	16V
\$606	1-554-303-21	SWITCH, TACTILE	(6)				021	1-101-006-00	CERAMIC	0.047uF		50V
\$607	1-554-303-21	SWITCH, TACTILE	(7)				C22	1-163-059-00	CERAMIC CHIP	0. 01uF	20%	16V
8608	1-554-303-21	SWITCH, TACTILE	(8)									
\$609	1-554-303-21	SWITCH, TACTILE	(9)				C23	1-124-119-00	ELECT	330 u F	20%	16V
\$610	1-554-303-21	SWITCH, TACTILE	(0)				C24	1-123-382-00	ELECT	3. 3uF	20%	100V
							C25		CERAMIC CHIP	22000PF		25V
		SWITCH, TACTILE					C26		CERAMIC CHIP	6800PF	20%	12V
\$612		SWITCH, TACTILE					C27	1-162-516-11	CERAMIC CHIP	100PF	10%	50V
\$613		SWITCH, TACTILE							51 50 T	4.5	0.00/	5011
		SWITCH, TACTILE	•				C28	1-124-903-11		1uF	20%	50V
\$615	1-554-303-21	SWITCH, TACTILE	(1001)	NG -)			C30	1-124-903-11		1uF	20%	50V
0616	1 554 202 21	SWITCH, TACTILE	/DAND	١			C31	1-124-902-00		0. 47uF	20%	50V
		SWITCH, TACTILE					C32	1-124-463-00		0. 1uF 0. 0068uF	20% 5%	50V 50V
		SWITCH, TACTILE			AN)		000	1-130-461-00	MILAN	0. 000our	376	3U V
\$619		SWITCH, TACTILE					C34	1-123-382-00	FLECT	3. 3uF	20%	100V
\$620		SWITCH, TACTILE			,		C35	1-130-481-00		0. 0068uF		50V
3020	1 004 000 21	0111011, 17107722	(0110)	,			C36	1-123-382-00		3. 3uF	20%	100V
\$621	1-554-303-21	SWITCH, TACTILE	(DAIL	Y)			C37	1-124-907-11		10 u F	20%	50V
\$622		SWITCH, TACTILE)		C38	1-124-907-11		10uF	20%	50V
\$623		SWITCH, TACTILE			•							
\$624	1-554-303-21	SWITCH, TACTILE	(TIME	-)			C39	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V
\$625		SWITCH, TACTILE					C40	1-124-463-00	ELECT	0.1uF	20%	50V
							C41	1-124-927-11	ELECT	4. 7uF	20%	100V
\$626	1-554-303-21	SWITCH, TACTILE	(SLEE	P)			C42	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V
\$627		SWITCH, TACTILE					C43	1-126-176-11	ELECT	220 u F	20%	10V
\$628		SWITCH, TACTILE										
\$629	1-554-303-21	SWITCH. TACTILE	(BACK)			C44	1-163-059-00	CERAMIC CHIP	0.01uF	20%	16V
\$630	1-554-303-21	SWITCH, TACTILE	(SYST	EM PC	WER)		C45	1-123-382-00		3. 3 u F	20%	100V
							C46	1-161-375-00		2200PF	20%	25V
\$631	1-554-303-21	SWITCH. TACTILE	(ST/N	UTE)			C48	1-123-382-00		3. 3uF	20%	100V
\$632		SWITCH, TACTILE					C49	1-161-375-00		2200PF	20%	25V
\$633		SWITCH, TACTILE			1)							

The components identified by mark or dotted line with mark are critical for safety.
Replace only with part number specified

TUNER

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description		Remark
 C51	1-124-477-11	ELECT	47uF	20%	25V	D24	8-719-987-63			
C 5 2	1-124-252-00		0.33uF	20%	50V	D61	8-719-987-63	DIODE 1N414	8M	
C53		CERAMIC CHIP	33PF	5%	50V			FORUT FUR		
C61		CERAMIC CHIP	22000PF		25V			< FRONT END >		
C62	1-163-063-00	CERAMIC CHIP	22000PF		25V		4 400 000 01	FRANT FUR FM	. (ACD HV)	
			_			FE1		FRONT END, FN FRONT END (FN		
C63		CERAMIC CHIP	22000PF		25V	FE1		ENCAPSULATED		
C64		CERAMIC CHIP	22000PF		25V	FE61		ENCAPSULATED		
C65		CERAMIC CHIP	22000PF		25V	FE62	1-230-403-11	ENGAFSULATED	COMPONENT	
C66		CERAMIC CHIP	22000PF	1.09/	25V			< 1C >		
C67	1-102-120-00	CERAMIC	0. 0018uF	1076	50V			. 10 /		
C68	1-163-011-11	CERAMIC CHIP	1500PF	20%	25V	1021	8-759-821-45			
C69	1-163-063-00	CERAMIC CHIP	22000PF		25V	1081	8-759-820-91	IC LC7218		
C70		CERAMIC CHIP	22000PF		25V					
C71	1-163-063-06	CERAMIC CHIP	22000PF		25V			< COIL >		
C72		CERAMIC CHIP	22000PF		25V				400	
						L1	1-410-645-31		100uH	
C73		CERAMIC CHIP	22000PF		25V	L21	1-407-500-00		4. 7mH	
C81	1-102-961-00		27PF	5%	50V	L61	1-410-525-11	INDUCTOR	220uH	
C82	1-102-961-0		27PF	5%	50V			< LOW PASS F	IITER >	
C83		CERAMIC CHIP	0.01uF	20%				CON INCO I	I LI LII	
C84	1-163-059-0	CERAMIC CHIP	0. 01uF	20%	16V	I DE 21	1-235-164-00	FILTER, LOW	PASS	
		A AFRANIA AUIR	0. 01uF	20%	16V			FILTER, LOW		
C85		CERAMIC CHIP	0. 0 tur 47uF	20%		1 1122	1 200 104 00			
C86	1-124-477-1		0. 01uF	20%				< TRANSISTOR	>	
C87		O CERAMIC CHIP O CERAMIC CHIP	0. 01u; 0. 01uF	20%						
C88	1-103-059-0		2. 2uF	20%		01	8-729-230-X)	TRANSISTOR	2SC2669-0Y	
C101	1-124-325-1	, LLLVI	£1 £0.			02	8-729-230-X	TRANSISTOR	2SC2669-0Y	
C102	1-124-463-0	n F1FCT	0. 1uF	20%	50V	021	8-729-119-78		2SC2785-HFE	
C102		O CERAMIC CHIP	0. 01uF	20%	16V	022	8-729-119-78		2SC2785-HFE	
C104		O CERAMIC CHIP	0.01uF	20%	16V	023	8-729-900-6	TRANSISTOR	DTA114ES	
C105	1-124-477-1		47uF	20%	25V					
C106	1-136-173-0	0 FILM	0. 47uF	5%	50V	024		TRANSISTOR	DTC114ES	
						026		TRANSISTOR	DTC114ES	
C107	1-124-463-0		0. 1uF	20%		027		TRANSISTOR	2SC2603-EF	
C108		O CERAMIC CHIP	22000PF		25V	028		5 TRANSISTOR	2SC2603-EF	
C109	1-102-963-0	0 CERAMIC	33PF	5%	50V	061	8-129-900-8	TRANSISTOR	DTC114ES	
		< CERAMIC FIL	TFR >			Q62	8-729-900-8	O TRANSISTOR	DTC114ES	
		C OFFICIAL O 11F	. = 11 -			063		O TRANSISTOR	DTC114ES	
CF1	1-567-389-1	1 FILTER, CERAM	II C			Q64		5 TRANSISTOR	2SC2603-EF	
CF2		1 FILTER, CERAM				065		6 TRANSISTOR	2SA1175-HFE	
CF21		1 OSCILLATOR. C	ERAMIC			Q66	8-729-900-8	O TRANSISTOR	DTC114ES	
CFT2	1 1-404-853-	1 TRANSFORMER, 1	F (CERAMIC	FILTER	?)					
• • • • •						Q81		1 TRANSISTOR	DTA114ES	
		< CONNECTOR >	•			082		O TRANSISTOR	DTC114ES	
						083		7 TRANSISTOR	2SK246-GR3	
* CNJ1	1-568-273-	11 SOCKET, CONNE	CTOR 7P			Q84		3 TRANSISTOR	2SC3113-AB	
* CNJ3		11 SOCKET, CONNE				Q85	8-129-202-6	7 TRANSISTOR	2SK246-GR3	
CNJ4	1-568-269-	11 SOCKET, CONNE	ECTOR 3P			Q86	8-720-236-0	3 TRANSISTOR	2SC3113-AB	
		< DIODE >				400	0 173.700_2	· Immotoron	2000110 110	
		V DIVUL /						< RESISTOR	>	
D21	8-719-987-	63 DIODE 1N414	48M							
D22	8-719-987-		48M			<u></u> R 1	1-249-401-1		47 5%	1/4W F
D23	8-719-987-	63 DIODE 1N41	48M			R3	1-249-329-1	1 CARBON MELF	330 5%	1/8W

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

TUNER

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description			ı	Remark
R4	1-249-329-11		330	5%			R83	1-249-335-11	CARRON MELE		5%		
R5	1-249-329-11	CARBON MELF	330	5%	1/8W		R84	1-249-335-11			5%	1/8W 1/8W	
R6	1-249-350-11	CARBON MELF	18K	5%	1/8W		R85	1-249-347-11			5%		
							R86	1-249-335-11			5%	1/8W	
R7	1-249-329-11	CARBON MELF	330	5%	1:/8W		R87	1-249-347-11			5%	1/8W	
R8	1-249-332-11	CARBON MELF	560	5%	1/8W			. 210 041 11	OVERDAM MICEL	IUK	376	1/8W	
R9	1-249-352-11	CARBON MELF	27K	5%	1/8W		R88	1-249-343-11	CARRON MELE	4 7V	E4/	1 / 1014	
№ R21	1-249-404-00		82	5%	1/4W	F	R89	1-249-335-11			5%	1/8W	
R22	1-249-430-11		12K	5%	1/4W	,	R90	1-249-343-11			5%	1/8W	
				• • • •	.,		R91	1-249-335-11				1/8W	
R23	1-249-335-11	CARBON MELF	1 K	5%	1/8W		1 R92	1-249-401-11			5%	1/8₩	_
R24	1-249-353-11		33K	5%	1/8W		2.711.92	1 243-401-11	CARDUN	47	5%	1/4W	F
R25	1-249-346-11		8. 2K		1/8W		R101	1-249-341-11	CARRON MELE	0.04	***		
R27	1-249-432-11		18K	5%	1/4W		R102					1/8W	
R28	1-249-423-11		3. 3K		1/4W		R103	1-249-332-11			5%	1/8W	
			0, 0,	٧,٠	17 711			1-249-335-11		1 K	5%	1/8W	
R29	1-249-347-11	CARRON MELE	10 K	5%	1/8W		R104	1-249-328-11		270	5%	1/8W	
R31	1-249-331-11		470	5%	1/8W		R105	1-249-343-11	CARBON MELF	4. 7K	5%	1/8₩	
R32	1-249-347-11		10K	5%	1/8W		Diac	1 040 000 ::	040000				
R33	1-249-347-11						R106	1-249-339-11		2. 2K	5%	1/8₩	
R34	1-249-347-11		10K 4.7K	5% 5%	1/8₩ 1/4₩		R107	1-249-343-11		4. 7K	5%	1/8W	
1104	1 243 420 11	CARDON	4. / K	378	1/4W		R108	1-249-323-11		100	5%	1/8₩	
R35	1-249-355-11	CADDON MELE	471	E8/	4./014		R109	1-249-343-11		4. 7K	5%	1/8W	
R37			47K	5%	1/8W		<u>/1</u> R110	1-249-405-11	CARBON	100	5%	1/4W	F
R38	1-249-359-11		100K		1/8W								
	1-249-363-11		220K		1/8W		R111	1-249-341-11		3.3K	5%	1/8W	
R39	1-249-339-11		2. 2K		1/8W		R112	1-249-332-11		560	5%	1/8W	
R40	1-249-338-11	CARBON MELF	1. 8K	5%	1/8W		R113	1-249-335-11		1 K	5%	1/8W	
0.44							R114	1-249-328-11		270	5%	1/8W	
R41	1-249-344-11		5. 6 K		1/8W		R115	1-249-351-11	CARBON MELF	22K	5%	1/8W	
	1-249-359-11		100K		1∕8₩								
	1-249-363-11		220K		1/8W		R116	1-249-339-11	CARBON MELF	2. 2K	5%	1/8W	
R44	1-249-339-11		2. 2 K		1/8W		R117	1-249-343-11	CARBON MELF	4. 7K	5%	1/8W	
R45	1-249-338-11	CARBON MELF	1. 8K	5%	1/8W		R118	1-249-323-11	CARBON MELF	100	5%	1/8W	
R46	1-249-344-11	CARBON MELF	5. 6K	5%	1/8W				< VARIABLE R	COLOTAD .			
1 R4 7	1-249-409-11	CARBON	220	5%	1/4W	F		·	V AWLINDEE W	E91910K >			
R48	1-249-359-11	CARBON MELF	100K		1/8W		RV21	1-238-013-11	DEC ADI CA	2000 2 20			
R49	1-249-359-11	CARBON MELF	100K	5%	1/8W		RV22	1-238-017-11	REG. ADJ. CA	100N 2. 2K			
	1-249-359-11 (100K		1/8W		RV24	1-238-017-11 F					
Daa								. 200 011 11 1	ico, ADO, UK	IDON ZZK			
	1-249-355-11 (47 K	5%	1/8W			<	TRANSFORME	>			
	1-249-351-11 (22K	5%	1/8W								
	1-249-355-11 (47 K	5%	1/8W		T21	1-404-807-11 T	TRANSFORMER,	DISCRIMIN	IATOR		
	1-215-493-00 N		1M	5%	1/4W								
R67	1-249-359-11 (CARBON MELF	100K	5%	1/8W			<	TERMINAL BO	ARD >			
R68	1-249-352-11 (ARBON MFIF	27K	5%	1/8W		* TM1	1_627_100_04_7	COMINAL OC.	D (4//-)			
	1-249-351-11 0		22K	5%	1/8W		77 (1971)	1-537-138-31 T	EUMINAL BOA	U (ANI)			
	1-249-331-11 0		470	5%	1/8W				TEGT GALLE				
	1-249-339-11 0		2. 2K	5%	1/8W			<	TEST POINT	>			
	1-249-351-11 0		22 K	5%	1/8W		* TP1	1-560-060-00 P	IN, CONNECTO	R 2P			
R73	1_040 047 11 0	ADDAN MELE	4.8.2	F6*	4 /000								
	1-249-347-11 0		10K	5%	1/8W	- 1		<	CRYSTAL >				
	1-249-347-11 C		10K	5%	1/8W								
D 0 4	1-249-343-11 C		4. 7K	5%	1/8W	İ	XT81	1-577-126-11 V	IBRATOR, CRY	STAL (7.2	MHz)		
R81 1	1-249-335-11 C	AKBON MELF	1 K	5%	1/8W	í					•		
R82	1-249-335-11 C		1 K	5%	1/8W	I							

The components identified by mark A or dotted line with mark A are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description		Remark
		MISCELLANEO		
		********	**	
<u></u> 10	1-575-651-11	CORD, POWER	(AEP, EE)	
<u> 1</u> 0	1-575-652-11	CORD, POWER	(UK)	
2	1-575-666-11	WIRE, FLAT	TYPE (11 CO	RE)
	1-526-751-00			
	1-526-794-11			
ACNJ802	1-526-751-00	OUTLET, AC	(UK)	
<u>^</u> CNJ802	1-526-794-11	OUTLET, AC	(AEP, EE)	
******	******	*******	********	**********
	ACCESSORIE	S & PACKING	MATERIALS	
	******	********	*******	
	4-920-940-01	SHEET (A).	PROTECTION	
*	4-929-563-01	CUSHION		
*	4-952-208-01	INDIVIDUAL	CARTON (FOR	R LBT-D507;AEP)
				R LBT-D607;AEP)

HARDWARE LIST

- #1 7-685-134-19 SCREW +BTP 2.6X8 TYPE2 N-S
 #2 7-621-773-93 SCREW (PANEL 2.6 TP2)
 #3 7-685-646-79 SCREW +BVTP 3X8 TYPE2 N-S
 #4 7-621-849-00 SCREW (BV/RING)
 #5 7-685-647-79 SCREW +BVTP 3X10 TYPE2 N-S
- The components identified by mark or dotted line with mark are critical for safety.

 Replace only with part number specified.

CDP-M43/M54

SERVICE MANUAL



AEP Model UK Model E Model Australian Model

> AEP Model UK Model E Model CDP-M54

CDP-M43 is the CD player section in LBT-D507/ D607/ D707, LBT-A50/A60/A70 series

Photo: CDP-M43

Model Name Using Similar Mechanism	CDP-497/597		
CD Mechanism Type	CDM-14L-5BD8A		
	BU-5BD8A		

SPECIFICATIONS

Com	pact	disc	play	ver
COIII	paci	ulac	Pia	

2 Hz to 20 kHz ±0.5 dB Frequency response More than 105 dB ······CDP-M54 Signal-to-noise ratio More than 100 dB ······CDP-M43 More than 98 dB ······CDP-M54 Dynamic range More than 92 dB ······CDP-M43 Less than 0.003%CDP-M54 Harmonic distortion Less than 0.004%CDP-M43 More than 102 dB ······CDP-M54 Channel separation More than 95 dB ······CDP-M43

Outputs

LINE OUT (FIXED) (phono jacks)

Output level 2 V(at 50 kilohms) Load impedance over 10 kilohms

LINE OUT (VARIABLE) (phono jacks) ·······CDP-M54

Output level max. 2 V(at 50

kilohms)

Load impedance over 50 kilohms

PHONES (stereo phone jack) ······CDP-M54

Output level max. 10 mW Load impedance 32 ohms

General

Power requirements

European model: 220 - 230V AC, 50/60Hz UK. Australian model: 240 V AC, 50Hz E model:

110 - 120, 220 - 240V AC,

50/60Hz

Power consumption Dimensions (approx., including projections)

355 \times 95 \times 325 mm(w/h/d) $(14 \times 3^{3/4} \times 12^{1/3})$ inches)

3.2 kg(7 lbs 1 oz) Weight (approx.)

(RM-D597) ······CDP-M54 Remote commander

Infrared control Remote control system

3 V DC with two R6 (size AA) batteries Power requirements

Dimensions (approx., including projections)

40 × 20 × 175 mm (w/h/d) (15/8 × 13/6 × 7 inches)

95 g(4 oz) Weight (approx.)

Supplied accessories

(1)(2 Phono plugs-2 phono plugs) Audio cord

(1)·····CDP-M54 Remote commander (2)·····CDP-M54 Sony SUM-3 (NS) batteries

Design and specifications are subject to change without notice.

CLASS 1 LASER PRODUCT LUOKAN 1 LASERLAITE KLASS 1 LASERAPPARAT

This Compact Disc player is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the rear exterior.





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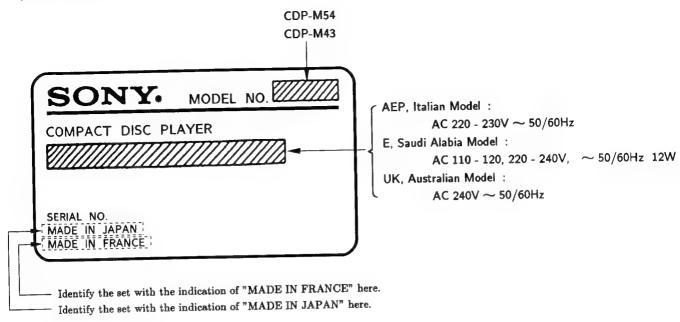
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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK A OR DOTTED LINE WITH MARK A ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MODEL IDENTIFICATION

- Specification Label -



NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

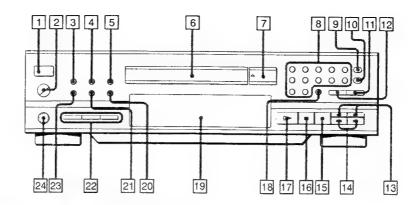
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30cm away from the objective lens.

SECTION 1 GENERAL

This section is extracted from instruction manual.

1-1 IDENTIFYING THE PARTS

CDP-M54 model



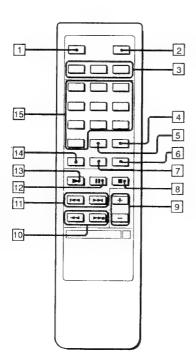
Front Panel

- 1 POWER switch (20)
- 2 LINE OUT/PHONE LEVEL control (14)
- 3 MUSIC SCAN button (40)
- A.SPACE/A.CUE button (28, 62)
- 5 PEAK SEARCH button (60)
- 6 Disc tray (20)
- ☑ ♠ OPEN/CLOSE button (20)
- 8 Numeric buttons (24, 38, 48, 52)
- 9 EDIT/TIME FADE button (52, 58)
- 10 TIME SET button (54, 58)
- 11 CLEAR (program clear) button (36, 42)
- 12 CHECK (program check) button (36)
- (26, 46) (manual search) buttons

- 15 (stop) button (22)
- 16 II (pause) button (22)
- 17 ► (play) button (22)
- 18 > 12 (over 12) button (24)
- 19 Display window (20)
- 20 FADER button (46)
- 21 REPEAT button (44)
- Play mode buttons CONTINUE button (30, 34, 38, 56) SHUFFLE button (30, 34, 38, 56)

PROGRAM button (34, 48)

- 23 TIME button (22)
- 24 PHONES jack
- * AMS is the abbreviation of Automatic Music Sensor.



Remote Commander

.....CDP-M54

- 1 A. SPACE/A. CUE button (28, 62)
- 2 MUSIC SCAN button (40)
- 3 Play mode buttons

CONTINUE button (30, 34, 38, 56) SHUFFLE button (30, 34, 38, 56) PROGRAM button (34, 48)

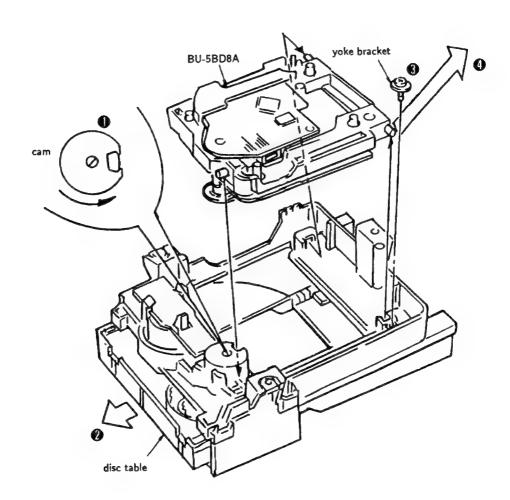
- 4 CLEAR (program clear) button (36, 42)
- 5 > 10 (over 10) button (24)
- 6 FADER button (46)
- 7 REPEAT button (44)
- 8 (stop) button (22)
- 9 LINE OUT LEVEL buttons (14)
- (26, 46) (manual search) buttons
- [1] I◄◄/▶▶ (AMS*) buttons (24, 48)
- 12 II (pause) button (22)
- 13 ► (play) button (22)
- 14 TIME button (22)
- 15 Numeric buttons (24, 38, 48, 52)
- * AMS is the abbreviation of Automatic Music Sensor.

SECTION 2 DISASSEMBLY

Note:

Follow the disassembly procedure in the nomerical order given.

- Turn the cam to the direction of arrow (Counter clock wise) by minus screw driver.
- 2 Take off the disc table.
- Remove the yoke bracket.
- Remove the MD (BU-5BD8A) to the direction of arrow.

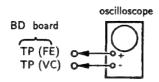


SECTION 3 ELECTRICAL BLOCK CHECKING

Note:

- 1. CD Block basically constructed to operate with-out adjustment. Therefore, check each item in order given.
- Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
- 3. Use the oscilloscope with more than $10M\Omega$ im-pedance.
- Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

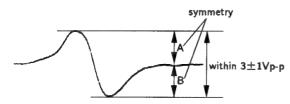
S Curve Check



Procedure:

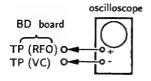
- Connect oscilloscope to test point TP (FE) on BD board.
- 2. Connect between test point TP (FEI) and TP (VC) by lead wire.
- Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
- Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

S curve waveform



- 5. After check, remove the lead wire connected in step 2.
- Note: Try to mesure several times to make sure that the ratio of A:B or B:A is more than 10:7.
 - Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

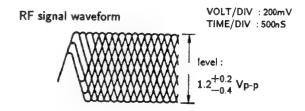


Procedure:

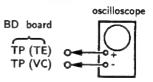
- Connect oscilloscope to test point TP (RFO) on BD board.
- 2. Turn Power switch on.
- 3. Put disc (YEDS-18) in and playback.
- Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note:

Clear RF signal waveform means that the shape "\$\rightsim "
can be clearly distinguished at the center of the waveform.



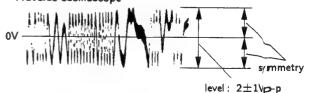
E-F Balance Check



Procedure:

- Connect test point TP (ADJ) to ground and TP (TEI) to TP (VC) with lead wire.
- Connect oscilloscope to test point TP (TE) on BD board.
- 3. Turn Power switch on.
- 4. Put disc (YEDS-18) in and playback.
- Confirm that the osilloscope waveform is sym-metrical on the top and bottom in relation to 0V, and check this level.

Traverse oscilloscope



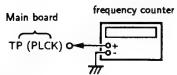
6. Remove the lead wire connected in step 1.

SECTION 4 DIAGRAMS

RF PLL Free-run Frequency Check

Procedure:

1. Connect frequency counter to test point (PLCK) with lead wire.

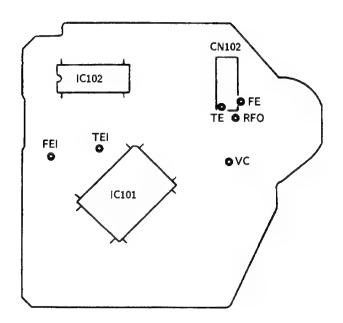


- 2. Turn Power switch on.
- Confirm that reading on frequency counter is 4. 3218 MHz.

Adjustment Location:

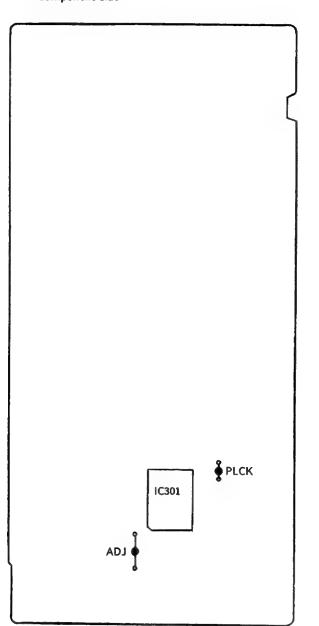
[BD BOARD]

- Solder side -

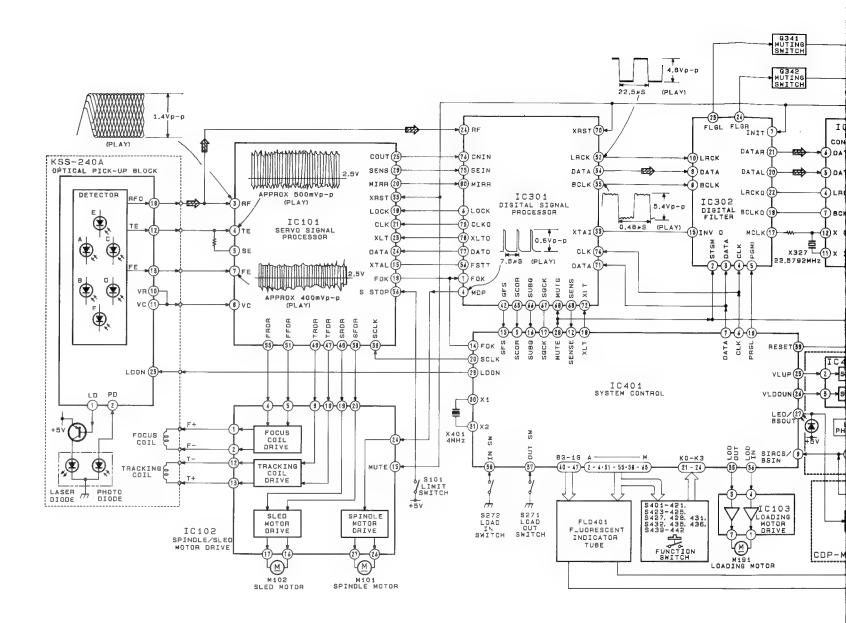


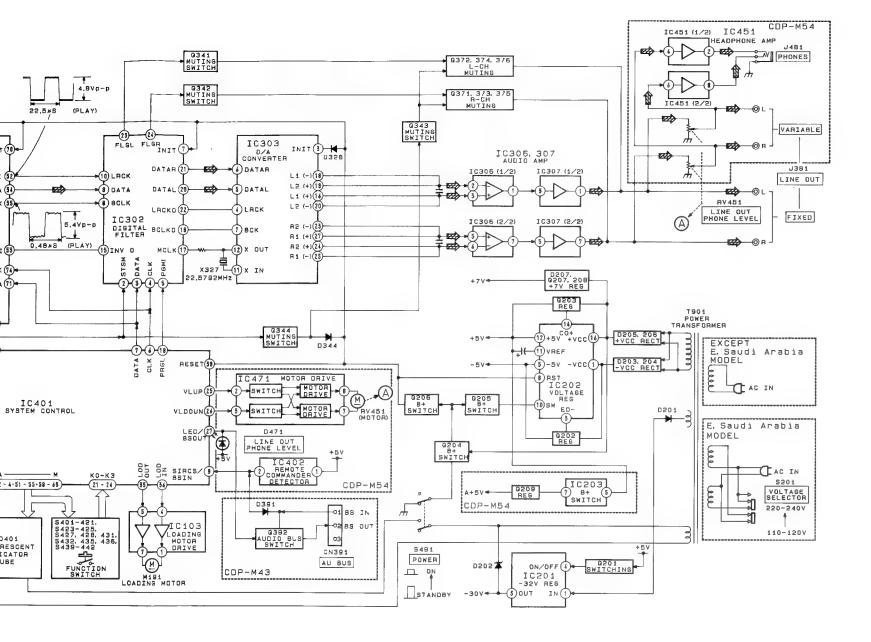
[MAIN BOARD]

- Component side -

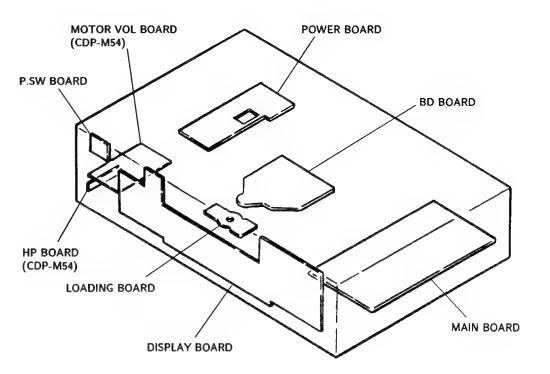


4-1 BLOCK DIAGRAM





4-2 CIRCUIT BOARDS LOCATION



4-3 SEMICONDUCTOR LEAD LAYOUTS

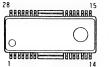
BA6208 RC4556S

2SB1094-LK





BA6297AFP





CXD2500AQ





2SD774-34

CXD2501Q





DTA144ES DTC114ES DTC144ES 2SC2458-YGR





1N4148M

2SA1175-HFE 2SC3623A-LK





BR4361F

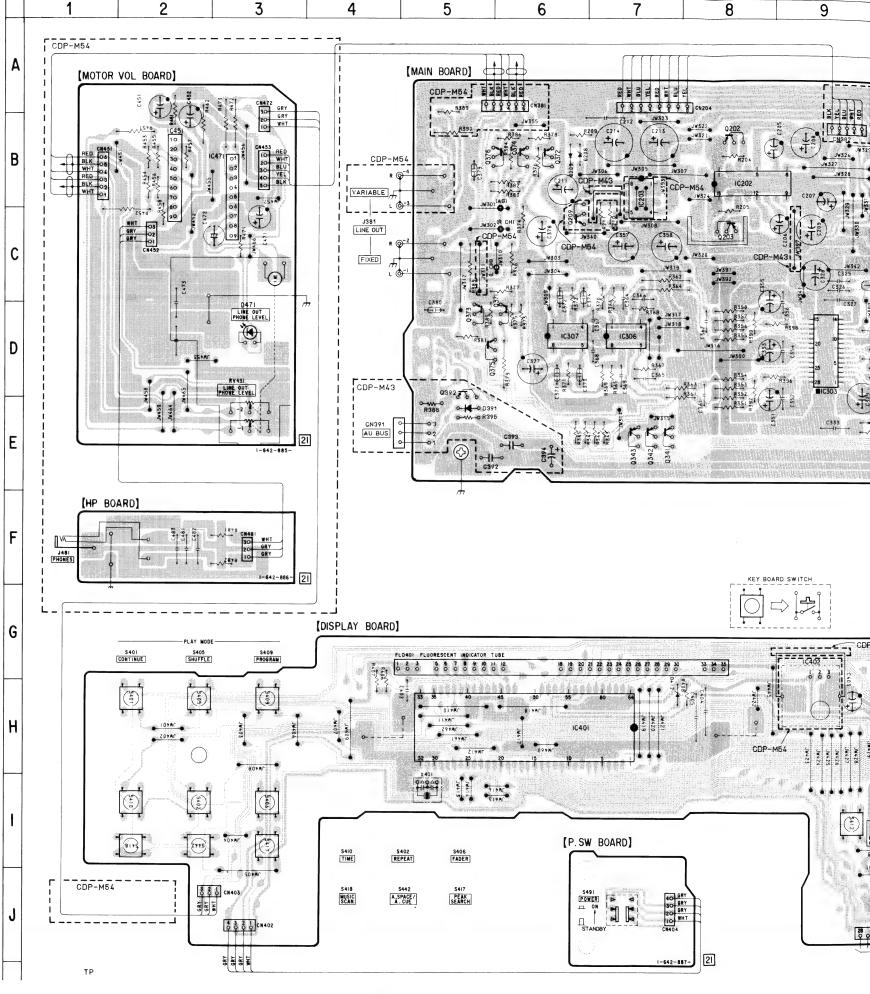
SEMICONDUCTOR LOCATION

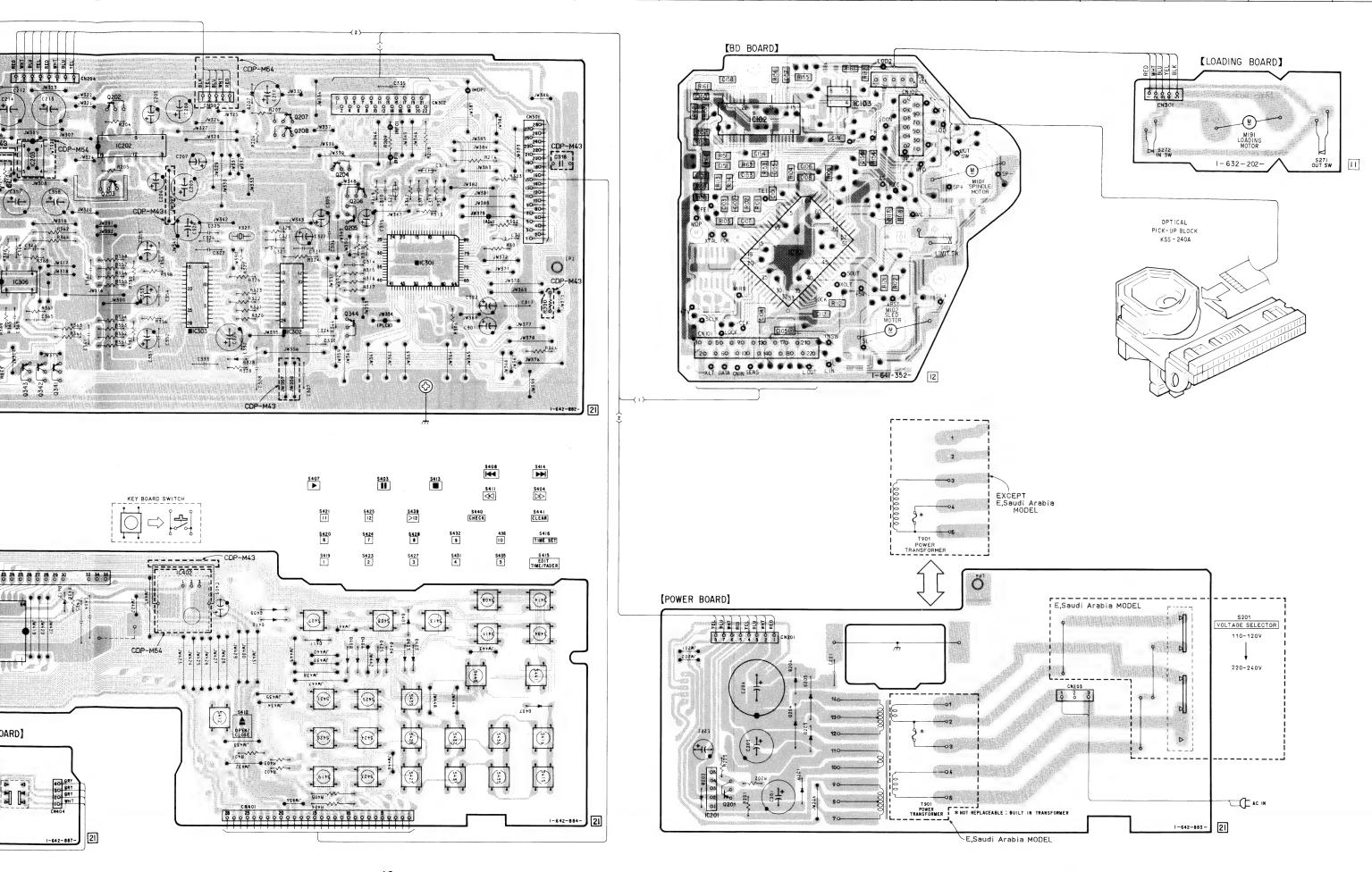
Ref. No.	Location	Ref. No.	Location
D201	J - 16	IC203	B-7
D202	J - 15	IC301	D-12
D203	I - 16	IC302	D-10
D204	I - 16	IC303	D-9
D205	I - 16	IC306	D-7
D206	I – 16	IC307	D-6
D207	B – 10	IC401	H-6
D208	B – 6	IC402	G-9
D209	B – 6	IC451	B-2
D328	E – 10	IC471	B-3
D344 D391 D401 D402 D403	D - 11 E - 5 H - 12 H - 12 H - 12	Q201 Q202 Q203 Q204	J - 15 B - 8 C - 8 B - 11
D404 D405 D406 D407 D408	H - 11 H - 11 H - 11 I - 13 H - 11	Q205 Q206 Q207 Q208 Q209 Q341	C - 11 C - 11 B - 10 B - 10 C - 6 E - 7
D409	H - 10	Q342	E - 7
D410	H - 10	Q343	E - 7
D411	H - 10	Q344	D - 11
D412	H - 7	Q371	D - 6
D471	D - 3	Q372	B - 6
IC101	C - 16	Q373	D - 5
IC102	B - 16	Q374	B - 6
IC103	B - 17	Q375	D - 5
IC201	J - 15	Q376	B - 6
IC202	B - 8	Q392	D - 5

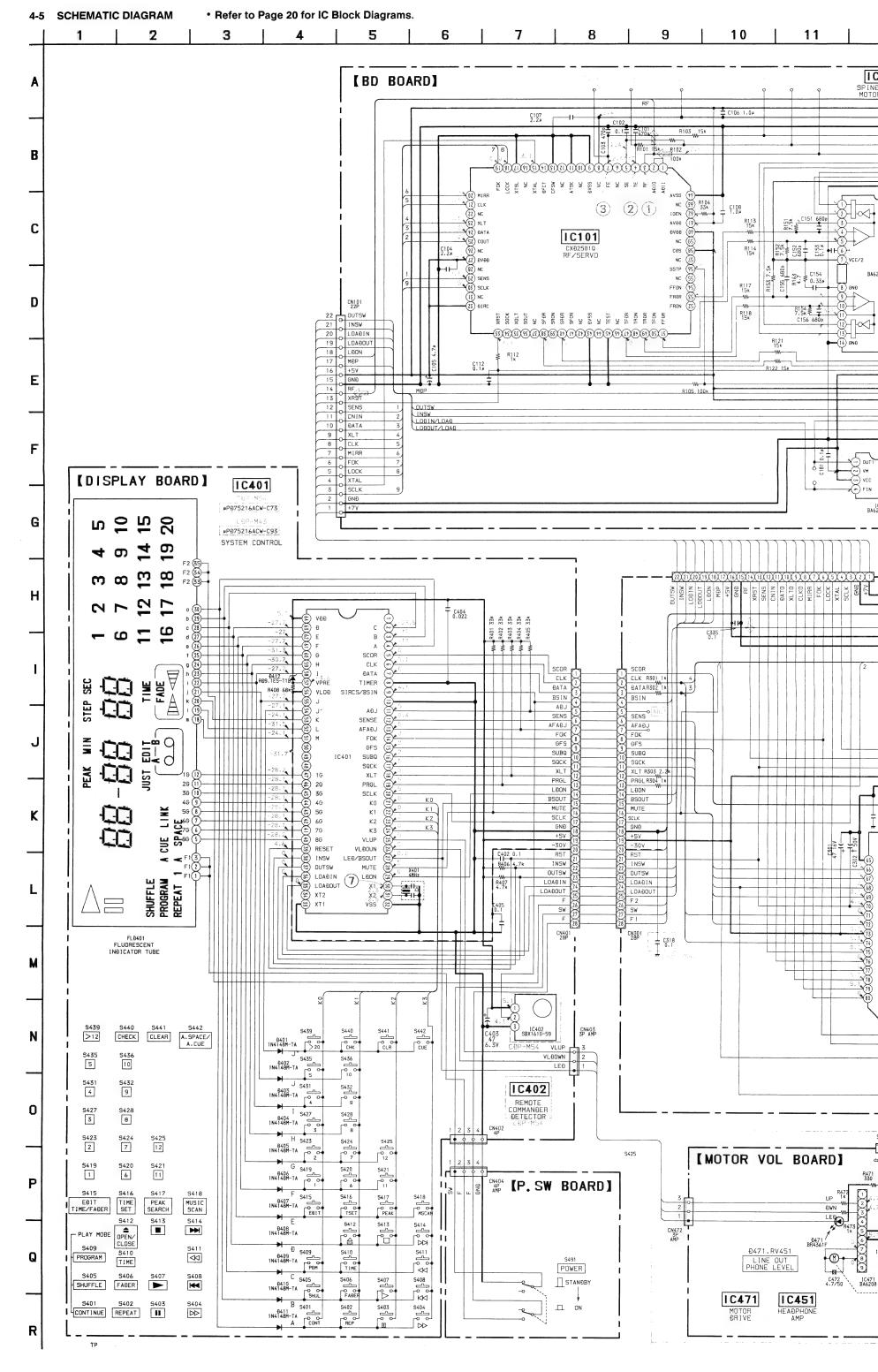
Note:

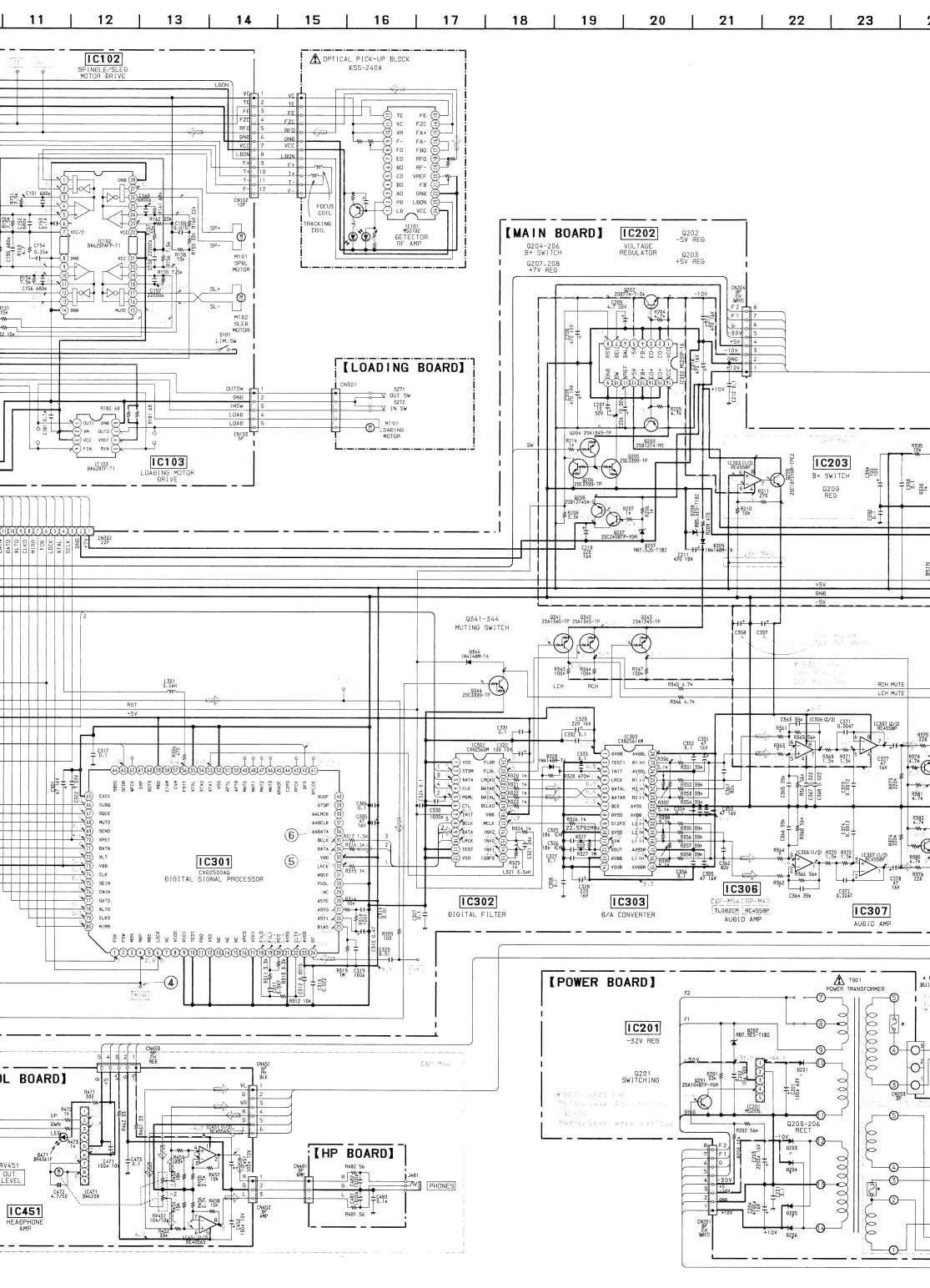
- parts extracted from the component side.
 parts mounted on the conductor side.
 - : Through hole.: Pattern on the side which is seen.
- : Pattern of the rear side.

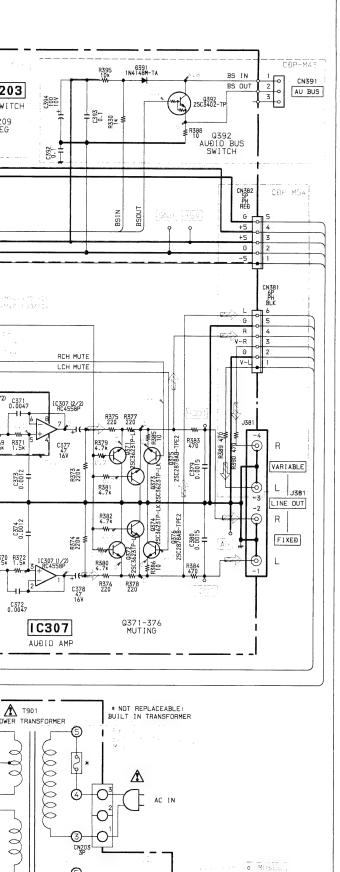
4-4 PRINTED WIRING BOARDS











AC IN

CN203 3P

S201
VOLTAGE
SELECTOR
220-240V

110-120V

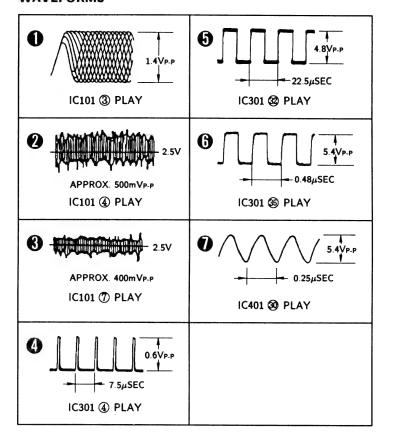
400000

-3

2

0

WAVEFORMS



FLD401

	8G	7G	6G	5G	4G	3G	2G	1G
а				a			1	3
b			1				2	4
С			f	b				5
d			—	- ;			6	8
е			e .	С			7	9
f			d					10
g								
h	>		PEAK	MIN	STEP	SEC	11	13
i			-	•			12	14
j	SHUFFLE		JUST	EDIT		TIME		15
k	PROGRAM		A. CUE	A		111-	16	18
1	REPEAT		LINK	В		-111	17	19
m	1		A. SPACE	اه)		FADE		20

Note:

- All capacitors are in $\mu\,F$ unless otherwise noted. pF: $\mu\,\mu\,F$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1\!\!/4W$ or less unless otherwise specified.
- : internal component.

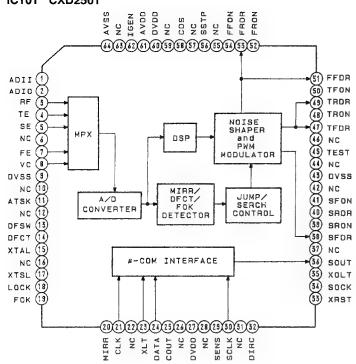
Note: The components identified by mark A or dotted line with mark A are critical for safety.

Replace only with part number specified.

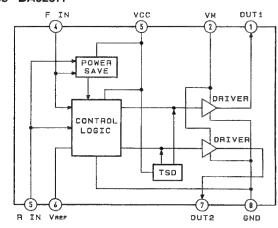
- 🖚 :B + Line
- B Line
- · Voltage and waveforms are dc with respect to ground ander no-signal (detuned) conditions.
- · no mark : STOP
- . Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- · Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal produc-
- · Circled numbers refer to waveforms.
- · Signal path.
- ∞>: CD

4-6 IC BLOCK DIAGRAM

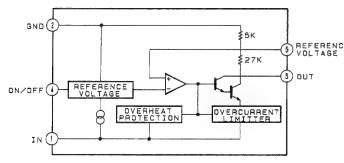
IC101 CXD2501



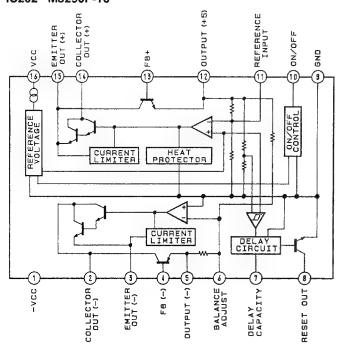
IC103 BA6287F



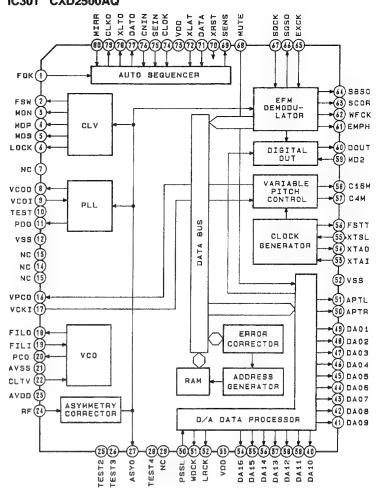
IC201 M5293L



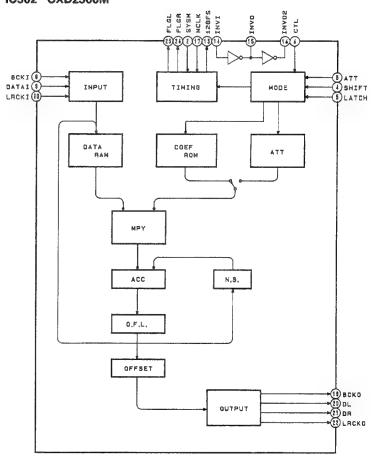
IC202 M5290P-16



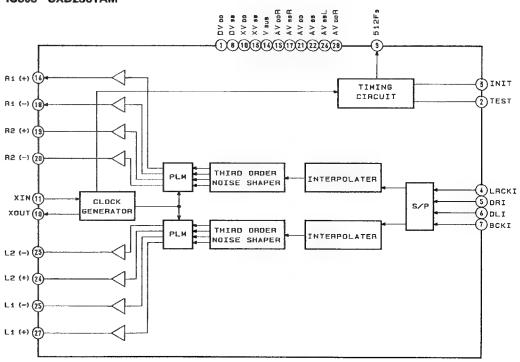
IC301 CXD2500AQ



IC302 CXD2560M



IC303 CXD2561AM



SECTION 5 EXPLODED VIEWS

NOTE:

3 INIT

(2) TEST

-() LACKI -(5) DAI -(6) DLI -(7) ВСКІ

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
 Color indication of Appearance Parts
- Example:
 KNOR RAIANCE (WHITE) (PED)

Parts color

KNOB, BALANCE (WHITE) (RED)

Cabinet's color

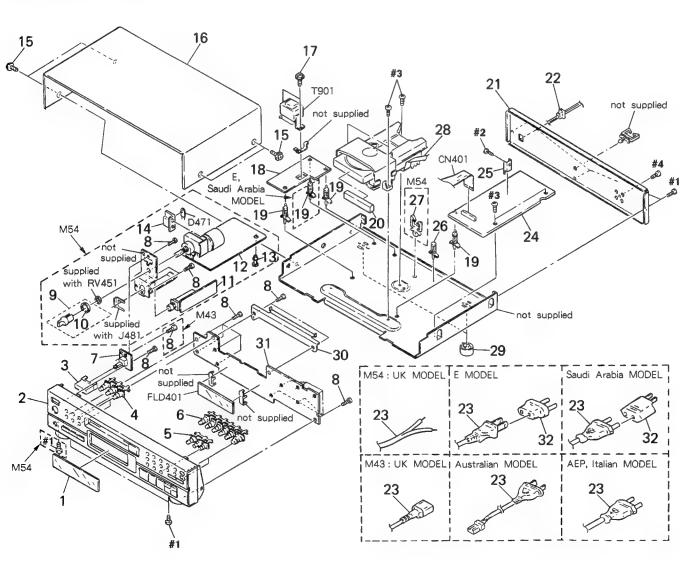
 Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark A or dotted line with mark A are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

5-1 CABINET SECTION



X-4942-345-1 PANEL ASSY, FRONT (BLA 2 X-4942-346-1 PANEL ASSY, FRONT 2 (GRAY) (EXCEPT X-4942-347-1 PANEL ASSY, FRONT (BL 2 4-950-176-01 BUTTON (POWER) (GRAY) 3 (EXCEPT M5 4-950-176-11 BUTTON (POWER) (BLACK) 3 4-950-177-01 BUTTON (G) (GRAY) (EXCEPT M54 4-950-177-11 BUTTON (G) (BLACK) (M54 4-950-179-01 BUTTON (MC/B) (GRAY) (EXCEPT M54 4-950-179-11 BUTTON (MC/B) (BLACK) (4-950-178-01 BUTTON (MC/A) (GRAY) (EXCEPT M54 4-950-178-11 BUTTON (MC/A) (BLACK) (1-642-887-21 P. SW BOARD 4-928-635-01 SCREW, +BV (2.6X8) TA A-4604-901-A KNOB (HP) ASSY (M54) 4-948-469-01 SPRING, RING (M54) 10 1-642-886-21 HP BOARD (M54) 11 A-4649-107-A MOTOR VOL BOARD, COMP **12** 3-676-567-00 SPACER (M54:E, AEP) * 13 4-922-980-01 HOLDER (LED) (M54) * 14 3-363-099-01 SCREW (CASE +3X8 TP2) 15 15 3-704-366-01 SCREW (CASE) (M3X8) (MA 4-919-376-31 CASE (BLACK) (M54/M43: 4-919-376-81 CASE (GRAY) (EXCEPT M5 16 4-886-821-11 SCREW, S TIGHT, +PTTW 1-642-883-21 POWER BOARD * 18 **•** 19 4-924-098-31 HOLDER, PC BOARD 4-950-174-01 PANEL, LOADING (GRAY) (EXCEPT M5

> 4-950-174-11 PANEL, LOADING (BLACK 4-950-174-21 PANEL, LOADING (BLACK

20

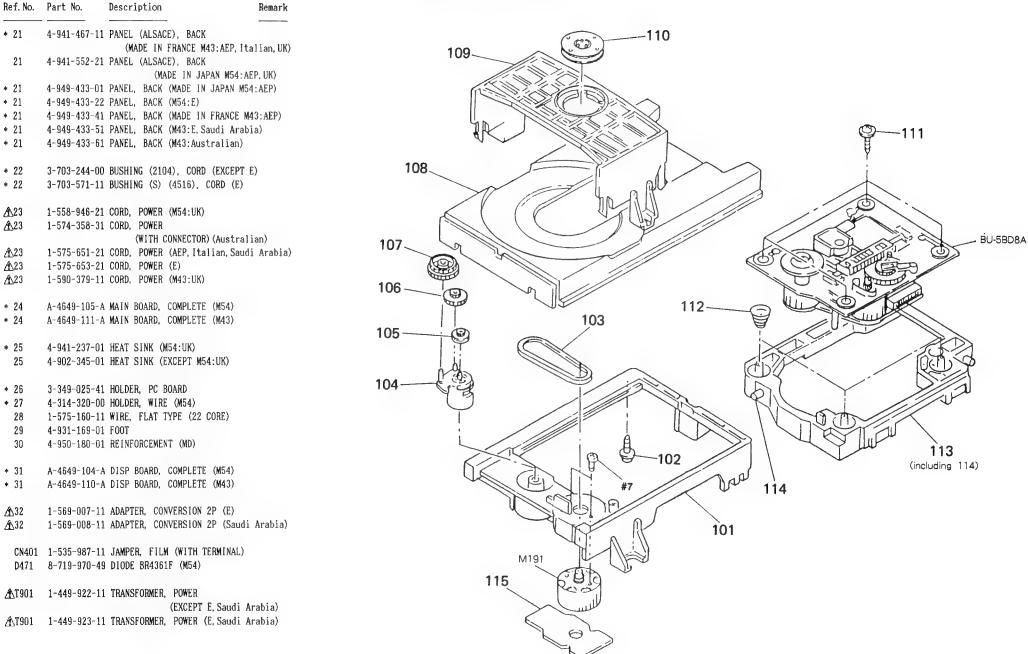
Ref. No. Part No.

Description

4-950-182-01 PLATE, INDICATION (M5

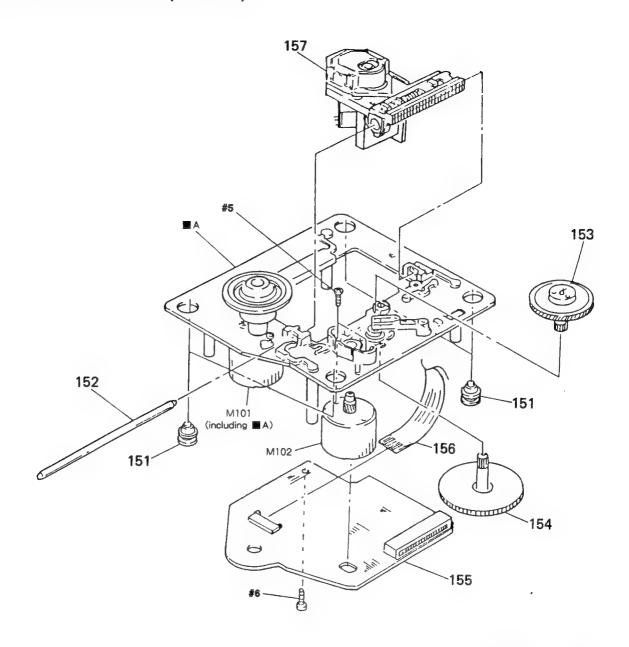
4-950-182-11 PLATE, INDICATION (M4:

5-2 MD SECTION (CDM14-5BD8A)



Ref. No.	Part No.	Description	Remark Ref	. No.	Part No.	Description	Remark
101	4-933 111-01	CHASSIS (MD) (MADE IN JAPAN)	1	.09	4-933-110-01	HOLDER (MG)	
101	4-933-111-11	CHASSIS (MD) (MADE IN FRANCE)	+ 1	10	1-452-538-11	MAGNET	
			1	11	4-933-134-01	SCREW (+PTPWH M2.6X6)	
* 102	4-917-583-21	BRACKET, YOKE					
103	4 -927-649-01	BELT	1	12	4-917-541-01	SPRING (B) (MADE IN FRANCE)	
104	4-933-109-01	CAM	1	12	4-948-503-01	SPRING (BU), COMPRESSION	
105	4-927-651 01	PULLEY (S)				(MADE IN JAPAN)	
106	4-927-628-01	GEAR (C)					
107	4-933-107-01	GEAR (PL)	1	13	4-933-129 01	HOLDER (BU)	
			1	14	4-933-108-01	SHAFT (CAM)	
108	4-948-894-01	TABLE (ALS). DISK (MADE IN FRA	NCE) * 1	15	1-632 -202 11	LOADING BOARD	
108	4-949-336-01	TABLE, DISK (MADE IN JAPAN)	M	1191	A-4604-363 A	MOTOR (L) ASSY	

5-3 OPTICAL PICK-UP BLOCK (BU-55BD8A)



Note: The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
151	4-933-126-01	INSULATOR (A)	
152	4-917-565-01	SHAFT, SLED	
153	4-917-567-01	GEAR (M)	
154	4-917-564-01	GEAR (P), FLATNESS	
* 155	A-4617-977-A	BD BOARD, COMPLETE	
156	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
∆ 157	8-848-144-11	DEVICE, OPTICAL KSS-240A	
M101	X-4917-523-3	BASE (OUTSERT) ASSY	
M102	X-4917-504-1	MOTOR ASSY	

SECTION 6 ELECTRICAL PARTS LIST



NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- - XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS

All resistors are in ohms METAL: Metal-film resistor

METAL OXIDE: Metal oxide-film resistor

F: nonflammable

 Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• SEMICONDUCTORS
In each case, u:μ, for example:
uA...:μA...., uPA....:μPA....
uPB....:μPB...., uPC....:μPC....

uPD....:μPD.... • CAPACITORS uF:μF

• COILS uH: μH The components identified by mark or dotted line with mark hare critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description		Re	mark	Ref. No.	Part No.	Description			Remark
+	A-4617-977-A	BD BOARD, COMPI	LETE					< RESISTOR >			
		**********	***								
						R101	1-216-077-00	METAL CHIP	15K	5%	1/10W
		< CAPACITOR >				R102	1-216-097-00		100K	5%	1/10W
						R103	1-216-077-00	METAL CHIP	15K	5%	1/10W
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	R104	1-216-085-00	METAL CHIP	33K	5%	1/10₩
C102	1-163-038-00	CERAMIC CHIP	0. 1uF		25V	R105	1-216-097-00	METAL CHIP	100K	5%	1/10W
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V						
C104		CERAMIC CHIP	2. 2uF		16V	R112	1-216-049-00	METAL CHIP	1K	5%	1/10W
C105	1-135-155-21	TANTALUM CHIP	4. 7uF	10%	16V	R113	1-216-077-00	METAL CHIP	15K	5%	1/10W
						R114	1-216-077-00	METAL CHIP	15K	5%	1/10W
C106	1-164-346-11	CERAMIC CHIP	1uF		16V	R117	1-216-077-00	METAL CHIP	15K	5%	1/10W
C107	1-164-505-11	CERAMIC CHIP	2. 2uF		16V	R118	1-216-077-00	METAL CHIP	15K	5%	1/10W
C108	1-164-346-11	CERAMIC CHIP	1uF		16V						
C112	1-163-038-00	CERAMIC CHIP	0. 1uF		25V	R121	1-216-077-00	METAL CHIP	15K	5%	1/10W
C151	1-163-007-11	CERAMIC CHIP	680PF	10%	50V	R122	1-216-077-00	METAL CHIP	15K	5%	1/10W
						R151	1-216-070-00	METAL CHIP	7. 5K	5%	1/10W
C152	1-163-007-11	CERAMIC CHIP	680PF	10%	50V	R152	1-216-070-00	METAL CHIP	7. 5K	5%	1/10W
C153	1-163-038-00	CERAMIC CHIP	0. 1uF		25V	R153	1-216-070-00	METAL CHIP	7. 5K	5%	1/10W
C154	1-164-336-11	CERAMIC CHIP	0. 33uF		25V						
C155	1-163-007-11	CERAMIC CHIP	680PF	10%	50V	R154	1-216-070-00	METAL CHIP	7. 5K	5%	1/10W
C156	1-163-007-11	CERAMIC CHIP	680PF	10%	50V	R155	1-216-070-00	METAL CHIP	7. 5K	5%	1/10W
						R156	1-216-070-00	METAL CHIP	7. 5K	5%	1/10W
C157	1-163-037-11	CERAMIC CHIP	0. 022uF	10%	25V	R157	1-216-085-00	METAL CHIP	33K	5%	1/10W
C158	1-163-037-11	CERAMIC CHIP	0. 022uF	10%	25V	R158	1-216-076-00	METAL CHIP	13K	5%	1/10W
C159	1-163-023-00	CERAMIC CHIP	0. 015uF	5%	50V						
C160	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	R159	1-216-085-00	METAL CHIP	33K	5%	1/10W
C181	1-163-038-00	CERAMIC CHIP	0. 1uF		25V	R160	1-216-081-00	METAL CHIP	22K	5%	1/10W
						R161	1-216-093-00	METAL CHIP	68K	5%	1/10W
		< CONNECTOR >				R162	1-216-085-00	METAL CHIP	33K	5%	1/10W
						R163	1-216-308-00	METAL CHIP	4. 7	5%	1/10W
CN101	1-568-796-11	SOCKET, CONNEC	TOR 22P								
CN102	1-568-795-11	SOCKET, CONNEC	TOR 12P			R181	1-216-021-00	METAL CHIP	68	5%	1/10W
CN103	1-564-721-11	PIN, CONNECTOR	(SMALL TYPE)	5P		R182	1-216-021-00	METAL CHIP	68	5%	1/10W
		< IC >									
IC101	8-752-344-48	IC CXD2501Q									
	8-759-071-80										
	8-759-040-83										







Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description		Remark
						/ OFFIT PAN .		
		< SWITCH >				< SWITCH >		
9101	1-572-085-11	SWITCH, LEAF (LIMIT SW)		S401	1-554-303-21	SWITCH, TACTII	F (CONTINUE)	
*****	*****	·**********	*******	S402		SWITCH, TACTII		
				S403		SWITCH, TACTII		
	A-4649-104-A	DISP BOARD, COMPLETE (M54)		S404	1-554-303-21	SWITCH, TACTII	.E (
*	A-4649-110-A	DISP BOARD, COMPLETE (M43)		S405	1-554-303-21	SWITCH, TACTII	E (SHUFFLE)	

				S406	1~554~303~21	SWITCH, TACTII	.E (FADER)	
		< CAPACITOR >		S407		SWITCH, TACTII		
		CONTROLLOW /				SWITCH, TACTII		
2400	1 104 150 11	CEDANIC G 1E	EUM					
	1-164-159-11		50V			SWITCH, TACTII		
	1-126-154-11		,	S410	1-554-303-21	SWITCH, TACTII	E (TIME)	
C404	1-161-494-00	CERAMIC 0. 022uF	25V					
C405	1-164-159-11	CERAMIC 0. 1uF	50V	S411	1-554-303-21	SWITCH, TACTII	.E (
				S412	1-554-303-21	SWITCH, TACTII	E (OPEN/CLOSE)	
		< CONNECTOR >		S413	1-554-303-21	SWITCH, TACTII	E (
				S414	1-554-303-21	SWITCH, TACTII	.E (
CN401	1-535-087-11	JAMPER, FILM (WITH TERMINAL)		S415		SWITCH, TACTI	•	
011401	1 333 367 11	Oran Elt, I I Em (WIIII I Elteritette)		0110	1 004 000 21	Dwillon, Indiii	L (LDII)	
		/ DIODE >		C416	1_554_202_21	CWITCH TACTI	C /TIME CET\	
		< DIODE >				SWITCH, TACTII		
				S417		•	E (PEAK SERCH)	
D401	8-719-987-63			S418			E (MUSIC SCAN)	
D402	8-719-987-63	DIODE 1N4148M		S419	1-554-303-21	SWITCH, TACTII	E (1)	
D403	8-719-987-63	DIODE 1N4148M		S420	1-554-303-21	SWITCH, TACTII	.E (6)	
D404	8-719-987-63	DIODE 1N4148M						
D405	8-719-987-63	DIODE 1N4148M		S421	1-554-303-21	SWITCH, TACTII	.E (11)	
				S423	1-554-303-21	SWITCH, TACTII	.E (2)	
D406	8-719-987-63	DIODE 1N4148M		S424	1-554-303-21	SWITCH, TACTIO	E (7)	
D407	8-719-987-63			S425		SWITCH, TACTII		
D408	8-719-987-63			S427		SWITCH, TACTII		
	8-719-987-63			0121	2 001 000 22		.2 (0)	
D403	8-719-987-63			S428	1-554-303-21	SWITCH, TACTII	F (8)	
D410	0-119-301-03	DIODE IN4140M						
5		DIADE ANALASM				SWITCH, TACTII		
	8-719-987-63			S432		SWITCH, TACTII		
D412	8-719-121-24	DIODE RD9. 1ESL		S435		SWITCH, TACTII		
				S436	1-554-303-21	SWITCH, TACTII	.E (10)	
		< FLUORESCENT INDICATOR >						
				S439	1-554-303-21	SWITCH, TACTII	E (>12)	
FLD401	1-519-681-11	INDICATOR TUBE, FLUORESCENT		S440	1-554-303-21	SWITCH, TACTII	E (CHECK)	
				S441	1-554-303-21	SWITCH, TACTII	E (CLEAR)	
		< 1C >		S442	1-554-303-21	SWITCH, TACTII	E (A. SPACE/A. CUE)
							•	
IC401	8-759-061-40	IC uPD75216ACW-C73 (M54)				< VIBRATOR >		
	8-759-070-44					,		
-	8-741-100-48			X401	1-577-358-21	VIBRATOR, CERA	MIC (AMH ₂)	
10402	0 141 100 40	TO DDATOTO 33 (mo-1)		HIOI	1 077 000 21	VIDIGITOR, OLIG	mil (Zimiz)	
		< RESISTOR >		******	*****	*****	*******	
		NESISION /				· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	
D404	1 040 405 44	CADDON 22V FW 1/4	/W		1_649_006_01	HD BUYDY (MEA)		
	1-249-435-11				1-042-000-21	HP BOARD (M54)		
	1-249-435-11					********		
R403	1-249-435-11		1					
R404	1-249-435-11	CARBON 33K 5% 1/4	4W			< CAPACITOR >		
R405	1-249-435-11	CARBON 33K 5% 1/4	4W	C481	1-162-294-31	CERAMIC	0.001uf 10%	50V (M54)
R406	1-249-425-11	CARBON 4. 7K 5% 1/4	4W	C482	1-162-294-31	CERAMIC	0. 001uF 10%	50V (M54)
R407	1-249-425-11	CARBON 4.7K 5% 1/4	4W]	C483	1-164-159-11	CERAMIC	0. 1uF	50V (M54)
	1-249-439-11		1					
11.100	_ = 10 100 11		•					

HP	LOADING	MAIN

Ref. No.	Part No.	Description		Re	emark	Ref. No	. Part No.	Description			Re	emark
		< JACK >				C315	1-126-300-11	ELECT	0. 47uF		20%	50V
						C317	1-164-159-11	CERAMIC	0. 1uF			50V
J481	1-568-519-41	JACK, LARGE TY	PE (PHONES)	(M54)		C318	1-164-159-11	CERAMIC	0. 1uF		50	OV (M43)
0.101			,			C319			100PF		10%	50V
		< RESISTOR >				C320			0. 01uF		5%	50V
R481	1-249-402-11	CARBON	56 5%	1/4W	(M54)	C321	1-162-208-31	CERAMIC	24PF		5%	50V
R482	1-249-402-11		56 5%	1/4W	(M54)	C322	1-124-994-11	ELECT	100uF		20%	10V
						C324	1-164-159-11	CERAMIC	0. 1uF			50V
******	******		*********	******	*****	C325			18PF		5%	50V
						C326	1-162-205-31	CERAMIC	18PF		5%	50V
*	1-632-202-11	LOADING BOARD										
	1 002 202 11	********				C327	1-164-159-11	CERAMIC	0. 1uF			50V
						C328			220uF		20%	16V
		< CONNECTOR >				C329			220uF		20%	16V
		(OUNIEDION /				C330			0. 001uF		10%	50V
± CN301	1-564-707-11	PIN, CONNECTOR	R (SMALL TYPE	5P		C331			0. 1uF		10%	50V
* CN301	1-304-707 11	FIN, CONNECTOR	(OFFICE IIII	, 01			1 101 100 11	OLIGATIO	0. 101			001
		< SWITCH >				C332	1-164-159-11	CERAMIC	0. 1uF			50V
						C333			0. 1uF			50V
S271	1-572-086-11	SWITCH, LEAF	(OUT SW)			C335	1-164-159-11	CERAMIC	0. 1uF			50V
S272	1-572-086-11	SWITCH, LEAF	(IN SW)			C351	1-126-022-11	ELECT	47uF		20%	16V
						C352	1-164-159-11	CERAMIC	0. 1uF			50V
******	*****	********	**********	*******	*****							
						C353			47uF		20%	16V
*		MAIN BOARD, CO				C354			0. 1uF			50V
*	A-4649-111-A	MAIN BOARD, CO	OMPLETE (M43))		C355			47uF		20%	16V
		*********	**********	ŧ.		C356			0. 1uF			507
						C357	1-124-994-11	ELECT	100uF	20%	10V	(M43)
		HEAT SINK (EX				0055	1 104 007 11	EL EOT	470E	വസ	100	(ME A)
*	4-941-237-01	HEAT SINK (M54	1:UK)			C357			470uF	20%		(M54)
		(04P40TM0P)				C358			100uF	20%		(M43)
		< CAPACITOR >				C358			470uF	20%		(M54)
				0.004	E011	C361			82PF		10%	50V
C205	1-126-163-11		4. 7uF	20%	50V	C362	1-162-280-31	CERAMIC	82PF		10%	50V
C206	1-126-059-11		10uF	20%	50V			annuura	0000			5011
C207	1-126-059-11		10uF	20%	50V	C363			39PF		5%	50V
C208	1-124-997-11		470uF	20%	10V	C364			39PF		5%	50V
C209	1-124-997-11	ELECT	470uF	20%	10V	C365			39PF		5%	50V
						C366			39PF		5%	50V
C210	1-126-024-11		220uF	20%	16V	C367	1-161-494-00	CERAMIC	0. 022uF			25V
C211	1-124-997-11		470uF	20%	10V							
C212	1-164-159-11		0. 1uF		50V	C368			0. 022uF			25V
C213	1-126-012-11	ELECT	470uF	20%	16V	C371			4700PF		5%	200V
C214	1-126-012-11	ELECT	470uF	20%	16V	C372			4700PF		5%	200V
						C373			0. 0012 ul	?	5%	50V
C301	1-126-022-11	ELECT	47uF	20%	16V	C374	1-130-472-00	MYLAR	0. 0012ul	7	5%	50V
C302	1-126-301-11	ELECT	1uF	20%	50V							
C305	1-126-022-11	ELECT	47uF	20%	16V	C377	1-126-022-11	ELECT	47uF		20%	16V
C306	1-164-159-11	CERAMIC	0. 1uF		50V	C378	1-126-022-11	ELECT	47uF		20%	16V
C307	1-164-159-11	CERAMIC	0. 1uF		50V	C379	1-106-347-00	MYLAR	1500PF		5%	200V
						C380	1-106-347-00	MYLAR	1500PF		5%	200V
C308	1-164-159-11	CERAMIC	0. 1uF		507	C392	1-164-159-11	CERAMIC	0. 1uF		5	OV (M43)
C311	1-130-491-00		0. 047uF	5%	50V							
C312	1-161-374-11	CERAMIC	0.0015uF	20%	50V	C393	1-164-159-11	CERAMIC	0. 1uF		5	OV (M43)
C313	1-161-494-00		0. 022uF		25V	C394	1-124-994-11	ELECT	100uF	209	ا ا	OV (M43)
C314	1-162-306-11		0. 01uF	20%	16V							
						•						

MAIN

								L		
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description			Re	emark
		< CONNECTOR >		Q372	8-729-141-30	TRANSISTOR	2SC3623A	-LK		
				Q373	8-729-141-30		2SC3623A			
* CN204	1-564-511-11	PLUG, CONNECTOR 8P		Q374	8-729-141-30		2SC3623A			
		SOCKET, CONNECTOR 28P		Q375	8-729-231-55		2SC2878-			
* CN302	1-568-822-11	SOCKET, CONNECTOR 22P		Q376	8-729-231-55		2SC2878-			
0002	1 000 011 11	330.121, 331.133133 201		Q392	8-729-900-80		DTC114ES			
* CN381	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P	(M54)	4002	0 120 000 00	THE HOLD TON	DIVITIES	(MTO)		
		PIN, CONNECTOR (SMALL TYPE) 5P				< RESISTOR >				
		PIN, CONNECTOR 3P (AU BUS) (M43)				(nabibion)				
0.1002	1 000 001 11	111, 001111101011 01 (110 000) (11110)		R204	1-249-425-11	CARRON	4. 7K	592	1/4W	
		< DIODE >		R205	1-249-425-11		4. 7K		1/4W	
				R206	1-249-417-11		1K	5%	1/4W	
D207	8-719-114-49	DIODE RD7. 5JSB2		R207	1-249-417-11		1K	5%	1/4W	
D208	8-719-109-89			R208	1-249-423-11		3. 3K		1/4W	
D209	8-719-987-63				1 210 120 11	Olatoon .	0. 01.	0.0	1/ 1"	
D328	8-719-987-63			R209	1-249-413-11	CARBON	470	5%	1/4W	
D344	8-719-987-63			R210	1-249-429-11		10K		1/4W	(M54)
D391	8-719-987-63			R211	1-249-410-11		270	5%	1/4W	
		,		R214	1-249-417-11		1K	5%	1/4W	(
		< IC >		R301	1-249-417-11		1K		1/4W	
									-,	
IC202	8-759-630-21	IC M5290P-16		R302	1-249-417-11	CARBON	1K	5%	1/4W	
IC203	8-759-945-58	IC RC4558P (M54)		R303	1-249-421-11		2. 2K		1/4W	
IC301	8-752-337-26	IC CXD2500AQ		R304	1-249-417-11		1K		1/4W	
IC302	8-752-342-65	IC CXD2560M	}	R306	1-249-413-11	CARBON	470		1/4W	
				R309	1-249-405-11	CARBON	100		1/4W	
IC303	8-752-349-01	IC CXD2561AM	İ							
IC306	8-759-503-91	IC TLO82ACP (M54)		R311	1-249-423-11	CARBON	3. 3K	5%	1/4W	
IC306	8-759-945-58	IC RC4558P (M43)		R312	1-249-429-11	CARBON	10K	5%	1/4W	
IC307	8-759-945-58	IC RC4558P		R313	1-249-423-11	CARBON	3. 3K	5%	1/4W	
				R314	1-249-429-11		10K	5%	1/4W	
		< JACK >		R315	1-249-417-11	CARBON	1K	5%	1/4W	
7004	4 500 440 44	TACK DIN OD (LINE OUT) (MAO)		D040	4 040 445 44					
J381		JACK, PIN 2P (LINE OUT) (M43)		R316	1-249-417-11				1/4W	
* J381	1-569-443-11	JACK, PIN 4P (LINE OUT) (M54)		R317	1-249-419-11		1. 5K		1/4W	
		(COII)		R318	1-249-441-11		100K		1/4W	
		< COIL >		R319	1-247-903-00				1/4W	
L301	1-408-403-00	INDUCTOR 3. 3uH		R320	1-249-417-11	CARBUN	1K	5%	1/4W	
L301	1-408-403-00			R321	1-249-417-11	CADDON	1K	5%	1/4W	
1321	1 400 403 00	1. Juli		R322	1-249-417-11					
		< TRANSISTOR >		R323	1-249-417-11				1/4₩	
		(TREADISTOR /		R324	1-249-417-11				1/4₩	
Q202	8-729-140-96	TRANSISTOR 2SD774-34		R325	1-249-417-11				1/4W 1/4W	
Q203	8-729-141-83			11023	1 243 417 11	CARDON	11/	JA	1/4"	
Q204	8-729-900-65			R326	1-249-417-11	CARRON	1K	5%	1/4W	
Q205	8-729-900-89			R327	1-247-903-00				1/4W	
4200	0 120 000 00			R328	1-247-895-00		470K		1/4W	
Q206	8-729-900-89	TRANSISTOR DTC144ES		R330	1-249-417-11				1/4W	(M43)
Q207	8-729-230-45			R343	1-249-441-11		100K		1/4W	(M43)
Q208	8-729-141-83						10011	-70	p., 111	
Q209	8-729-281-52			R344	1-249-441-11	CARBON	100K	5%	1/4W	
Q341	8-729-900-65			R345	1-249-425-11		4. 7K		1/4₩	
-				R346	1-249-425-11		4. 7K		1/4W	
Q342	8-729-900-65	TRANSISTOR DTA144ES		R347	1-249-441-11		100K		1/4W	
Q343	8-729-900-65			R351	1-249-436-11				1/4W	
Q344	8-729-900-89						,		_, _,	
Q371	8-729-141-30	TRANSISTOR 2SC3623A-LK								

MAIN MOTOR VOL

Ref. No.	Part No.	Description			Re	emark	Ref. No.	Part No.	Descripti	on		Re	emark
R352	1-249-436-11	CARBON	39K	5%	1/4W				< VIBRATO	OR >			
R353	1-249-436-11	CARBON	39K	5%	1/4W								
R354	1-249-436-11	CARBON	39K	5%	1/4W		X327	1-579-314-11	VIBRATOR,	CRYSTAL (22	. 5792N	(Hz)	
R355	1-249-436-11	CARBON	39K	5%	1/4W								
R356	1-249-436-11	CARBON	39K	5%	1/4₩	ĺ	******	*******	*******	********	*****	*****	****
R357	1-249-436-11	CARBON	39K	5%	1/4W		*	A-4649-107-A	MOTOR VOL	BOARD, COMP	LETE ((M54)	
R358	1-249-436-11		39K	5%	1/4W					*****			
R361	1-249-431-11	CARBON	15K	5%	1/4W	(M54)	*	4-922-980-01	HOLDER (L	.ED) (M54)			
R361	1-249-432-11		18K	5%		(M43)				(1.01)			
16501	1 243 402 11	Oracidon	1011	0.4	2/ 211	(111 20)			< CAPACIT	'OR >			
R362	1-249-431-11	CARRON	15K	5%	1 /4W	(M54)			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	· · ·			
R362	1-249-432-11		18K	5%		(M43)	C451	1-124-443-00	FLECT	100uF	20%	101	(M54)
NJU2	1-245-432-11	CARDON	1011	JA	1/ 44	(11137)	C452	1-124-443-00		100uF	20%		(M54)
naca	1 040 491 11	CADDON	1 E V	5%	1 /AW	(M54)		1-124-443-00		100uF	20%		(M54)
R363	1-249-431-11		15K			1 1							
R363	1-249-432-11	CARBUN	18K	5%	1/4#	(M43)		1-124-768-11		4. 7uF	20%		(M54)
			4.511	==	4 (400	(15.4)	C473	1-164-159-11	CEHAMIC	0. 1uF		501	(M54)
R364	1-249-431-11		15K	5%		(M54)							
R364	1-249-432-11	CARBON	18K	5%	1/4W	(M43)			< CONNECT	OR >			
R365	1-249-438-11	CARBON	56K	5%	1/4W	İ	* CN451	1-564-708-11	PIN. CONN	ECTOR (SMALL	TYPE)	6P (N	(54)
R366	1-249-438-11		56K	5%	1/4W			1-564-707-11					
R367	1-249-438-11		56K	5%	1/4W			1-506-468-11			,	01 (11	10 17
R368	1-249-438-11		56K	5%	1/4W		OHTIL	1 000 400 11	OUMILOTON	OI, MILL (110-17		
			1. 5K		1/4W				< DIODE >				
R369	1-249-419-11	CARDUN	1. JN	J/6	1/4#				V DIODE /				
R370	1-249-419-11	CARBON	1. 5K	5%	1/4W	İ	D471	8-719-970-49	DIODE BR	4361F			
R371	1-249-419-11	CARBON	1. 5K	5%	1/4₩				LI	NE OUT PHONE	LEVEL	(M54)	
R372	1-249-419-11		1. 5K	5%	1/4₩								
R373	1-247-887-00		220K		1/4W	1			< IC >				
R374	1-247-887-00		220K		1/4W								
	1 217 001 00	0131110-11	-		_,		IC451	8-759-981-89	IC RC45	56S (M54)			
R375	1-249-409-11	CARBON	220	5%	1/4W			8-759-962-08					
R376	1-249-409-11		220	5%	1/4W					()			
R377	1-249-409-11		220	5%	1/4W				< RESISTO	IR >			
R378	1-249-409-11		220	5%	1/4W				\ (ILO1010	11 /			
R379			4. 7K	-	1/4W		R451	1-249-435-11	CADRON	33K	5%	1 /4W	(M5A)
K3/9	1-249-425-11	CARDUN	4. / n	3/6	1/4#							-	
0000	1 040 407 44	CADDON	4 99	E0v	1 /#100		R452	1-249-435-11		33K	5%	1 /4W	
R380	1-249-425-11		4. 7K		1/4W		R453	1-249-432-11		18K	5%	1/4W	
R381	1-249-425-11		4. 7K		1/4W			1-249-432-11		18K	5%	1/4W	
R382	1-249-425-11		4. 7K		1/4W		R455	1-249-422-11	CAKBON	2. 7K	5%	1 /4W	(M54)
R383	1-249-413-11		470	5%	1/4W	September 1							
R384	1-249-413-11	CARBON	470	5%	1/4W		R456	1-249-422-11	CARBON	2. 7K	5%	1 /4W	
							R457	1-249-429-11	CARBON	10K	5%	1/4₩	(M54)
R385	1-249-393-11	CARBON	10	5%	1/4W		R458	1-249-429-11	CARBON	10K	5%	1/4W	(M54)
R386	1-249-393-11	CARBON	10	5%	1/4W		R461	1-249-399-11	CARBON	33	5%	1/4W	(M54)
R388	1-249-393-11	CARBON	10	5%		(M43)	R462	1-249-399-11	CARBON	33	5%	1/4W	(M54)
R389	1-249-413-11		470	5%		(M54)							
R390	1-249-413-11		470	5%		(M54)	R471	1-249-411-11	CARBON	330	5%	1 /4W	(M54)
	110 11				-,		R472	1-249-417-11		1K	5%	1 /4W	
R395	1-249-429-11	CARRON	10K	5%	1 /AW	(M43)	R473	1-249-417-11		1K	5%	1 /4W	
R396	1-249-429-11		5. 1K		1/4W	(m 20)	MILL	7 7-10 -411 II	CARDON	III	9.0	7 / 24	/110.11/
					1/4W				/ WADIADI	E RESISTOR >			
R397	1-247-848-11		5. 1K						/ AWITURY	r ursision >			
R398	1-247-848-11		5. 1K		1/4W		DUAC4	1.941.010.44	DEC TAR	CADDON 1027	102		
R399	1-247-848-11	CAKBUN	5. 1K	3%	1/4W		KV451	1-241-810-11	nes, VAK,	(LINE OUT P		RZIFI) /	M541
						I				(DINE OUI P	IVITE L	LY ALLI)	m91/

P. SW POWER

Ref. No.	Part No.	Description Re	mark	Ref. No.	Part No.	Description Remark
*	1-642-887-21	P. SW BOARD				< RESISTOR >
		*****		R201	1-249-435-11	CARBON 33K 5% 1/4W
		< SWITCH >		R202	1-249-438-11	
				R203	1-249-429-11	
S491	1-554-118-00	SWITCH, PUSH (1 KEY) (POWER)				< SWITCH >
******	*********	*************	****	A 0001	1 571 200 11	
*	1-642-883-21	POWER BOARD		 ∆S201	1-9/1-/22-11	SWITCH, VOLTAGE SELECTION (E, Saudi Arabia)
		******		******	*********	**********
		< CAPACITOR >				MISCELLANEOUS
C201	1-124-572-11	ELECT 100uF 20%	63V			********
	1-124-372 11		50V			
	1-124-556-11		16V	A\23	1-558-946-21	CORD, POWER (M54:UK)
	1-126-937-11		16V	₹ 23		CORD, POWER (WITH CONNECTOR) (Australian
	1-164-159-11		50V	A \23		CORD, POWER (AEP, Italian, Saudi Arabia)
OLLI	1 101 100 11	objective of the second		A\23		CORD, POWER (E)
		< CONNECTOR >		▲23		CORD, POWER (M43:UK)
	_	PLUG, CONNECTOR 8P PIN, CONNECTOR (PC BOARD) 3P		28	1-575-160-11	WIRE, FLAT TYPE (22 CORE)
+ UN200	1 000 200 11	Tin, doinington (10 botto) of		∱ 32	1-569-007-11	ADAPTER, CONVERSION 2P (E)
		< DIODE >		1 32		ADAPTER, CONVERSION 2P (Saudi Arabia)
D201	8-719-200-02	DIODE 10E2 (M43:E, Saudi Arabia)		* 110	1-452-538-11	
D201	8-719-200-82	DIODE 11ES2		156	1-575-001-11	WIRE, FLAT TYPE (12 CORE)
		(EXCEPT M54/M43:E, Saudi Ara	bia)	1 157 1	8-848-144-11	DEVICE, OPTICAL KSS-240A
				D471	8-719-970-49	DIODE BR4361F (M54)
D202	8-719-110-03	DIODE RD7. 5ES-B2		14104	V 4049 F00 0	DAGE (OUTGEDT) AGGV
				M101		BASE (OUTSERT) ASSY
D203		DIODE 10E2 (M43:E, Saudi Arabia)		M102	X-4917-504-1	
D203	8-719-200-82	DIODE 11ES2		M191	A-4604-363-A	MOTOR (L) ASSY
		(EXCEPT M54/M43:E, Saudi Ara	101a)	A T001	1 440 000 11	TRANSFORMED DOWED
	0.740.000.00	NIONE 1050 MASE Soudi Auskiel		⚠ T901	1-449-922-11	TRANSFORMER, POWER (EXCEPT E. Saudi A rabia)
		DIODE 10E2 (M43:E, Saudi Arabia)		∧ T901	1_##0_023_11	TRANSFORMER, POWER (E, Saudi Arabia)
D204	8-719-200-82	DIODE 11ES2 (EXCEPT M54/M43:E, Saudi Ara	hia)	₩771301	1-449-525-11	TRANSPORMER, FOWER (E, Saudi Al abia)
		(EAGET MOS/MSS.E, DaddI AT	DIA)	******	*********	**********
DOUE	8-710-200-02	DIODE 10E2 (M43:E, Saudi Arabia)				
	8-719-200-82					
D203	0 713 200 02	(EXCEPT M54/M43:E, Saudi Ara	bia)			
D206	8-719-200-02	DIODE 10E2 (M43:E, Saudi Arabia)				
	8-719-200-82					
2200		(EXCEPT M54/M43:E, Saudi Ara	nbia)			•
		< 1C >				
IC201	8-759-633-42	IC M5293L				
		< TRANSISTOR >				
Q2 01	8-729-119-76	TRANSISTOR 2SA1175-HFE				

Note: The components identified by mark \(\) or dotted line with mark \(\) are critical for sakt \(\). Replace only with part number specified.

ACCESSORIES & PACKING MATERIALS

- 1-465-867-11 REMOTE COMMANDER (RM-D597) (M54)
- 1-558-271-11 CORD, CONNECTION (MADE IN FRANCE)
- 1-559-533-11 CORD, CONNECTION (MADE IN JAPAN)
- 2-181-754-01 COVER, BATTERY (M54)
- 3-754-665-11 MANUAL, INSTRUCTION (English/French Spanish/Portuguese) (M54:AEP, E, UK)
- 3-754-665-41 MANUAL, INSTRUCTION (Dutch/German Italian/Swedish) (M54:AEP)
- * 4-922-998-01 CUSHION (MADE IN JAPAN)
- * 4-927-355-03 CUSHION (MADE IN FRANCE)
- * 4-948-882-31 INDIVIDUAL CARTON
 - (MADE IN FRANCE M43: AEP, Italian, UK)
- * 4-948-882-41 INDIVIDUAL CARTON
 - (MADE IN FRANCE M54: AEP, UK)
- * 4-949-971-21 INDIVIDUAL CARTON
 - (MADE IN JAPAN M43:AEP, Australian)
- * 4-949-971-41 INDIVIDUAL CARTON
 - (MADE IN JAPAN M54:E, AEP)

HARDWARE LIST

- #1 17-682-548-09 SCREW +BVTT 3X8 (S)
- #2 27-682-547-09 SCREW +B 3X6
- #3 37-682-547-04 SCREW +BVTT 3X6 (S)
- #4 47-685-646-79 SCREW +BVTP 3X8 TYPE2 N-S
- #5 57-621-255-15 SCREW +P 2X3
- #6 67-685-134-19 SCREW +BTP 2.6X8 TYPE2 N-S
- #7 77-621-775-10 SCREW +B 2. 6X4

CDP-C325M/C422M

SERVICE MANUAL



AEP Model UK Model E Model Australian Model

Photo: CDP-C325M

Model Name Using Similar Mechanism	CDP-C225/C325
Optical Pick-up Block Type	BU-5BD8B

SPECIFICATIONS

	CDP-C325M	CDP-C422M					
System	Compact disc digital a	udio system					
Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous						
Laser output	 Max. 44.6 μW° This output is the value measured at a distance of about 200 mm from the objective lens surfacent the Optical Pick-up Block. 						
Frequency response	2 Hz - 20 kHz (±0.5 dB)						
Signal to noise ratio	More than 100 dB						
Dynamic range	More than 98 dB						
Harmonic distortion	Less than 0.005% (1	kHz)					
Channel separation	More than 100 dB (1	kHz)					
Wow and flutter	Below measurable lim	it					
Outputs LINE OUT (phono jacks)	Output level 2 V (at 50 kilohms) Load impedance over 10 kilohms						
HEADPHONES (stereo phone jack)	Output level 0 - 10 mW (variable) (at 32 ohms)						

General

Power requirements	UK, Australian model: 240 V AC, 50/60 Hz AEP model: 220 - 230 V AC, 50/60 Hz E model: 110 - 120 or 220 - 240 V AC adjustable, 50/60 Hz
Power consumption	12 W
Dimensions (not including projecting parts and controls)	Approx. $355 \times 120 \times 385 \text{ mm (w/h/d)}$ (14 \times 4¾ \times 15¼ inches)
Weight	Approx. 5.0 kg (11 lbs 01 oz)

Supplied accessories

	CDP-C325M	CDP-C422M					
Audio signal connecting cord	1 (phono plug × 2 ↔ phono plug × 2)						
Remote commander	1 (RM-D325)						
Sony SUM-3 (NS) batteries	2						

Design and specifications subject to change without notice.





For the United Kingdom and European Countries.

CLASS 1 LASER PRODUCT LUOKAN 1 LASERLAITE KLASS 1 LASERAPPARAT This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential diference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

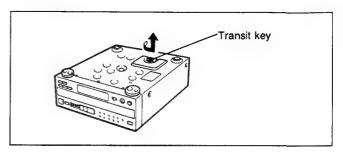
NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30cm away from the objective lens.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK A OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Note on the Transit Key



The transit key on the bottom exterior of the unit protects the optical system against shock during transportation. Before operating the CD player, be sure to remove the key by following the instructions on the label, and store it in a safe place.

When transporting the unit, replace the key in its original hole and lock it in place.

MODEL IDENTIFICATION

— Specification Label —

CDP-C325M
CDP-C422M

SONY

MODEL No.

COMPACT DISC PLAYER

AEP model: AC: 220-230V~50/60Hz UK, AUS model: AC: 240V~50/60Hz

E model: AC: 110-120, 220-240V~50/60Hz 12W

AUS: Australian model

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

1. Laser Diode Properties

Material: GaAlAsWavelength: 780 nm

• Emission Duration: continuous

Laser Output Power: less than 44.6 μW*

* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode),

replace the entire Optical Pick-up Block (including

APC board).

BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iøvrigt instruktionerne i servicemanualen.

ADVARSEL!!

Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.

1. Laser-didoe data

Materiale: GaAlAs
Bølgelængde: 780 nm
Udstråling: Kontinuerlig
Laseroutput: Max. 0,4 mW*

 Målt i 1,6 mm afstand fra overfladen af objektivlinsen på den optiske pick-up enhed.

• Klassifikation: Klasse IIIb.

 Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laserdioden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

LASER ADVARSEL MÆRKNING

Følgende mærkning findes indvendig i apparatet:

1. Advarsel Mærkning

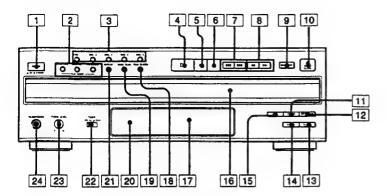


VAROITUS: Laite sisāltāā, laserdiodin, joka lāhettāā (nākymātontā) silmille vaarallista lasersateilyā.

SECTION 1 GENERAL

1-1. LOCATION AND CONTROLS

Front Panel

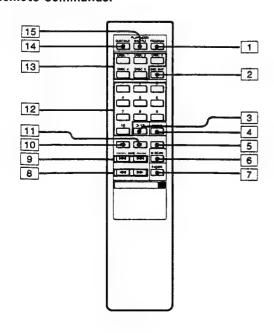


This section is extracted from instruction manual.

Refer to the pages indicated in () for details.

- 1 POWER switch (page 18)
- 2 PLAY MODE buttons CONTINUE button (page 18) SHUFFLE button (page 28) PROGRAM button (page 30)
- 3 DISC 1-5 buttons (page 18)
- ► (play) button (page 18)
- III (pause) button (page 18)
- (stop) button (page 18) 6
- 7 I◄◄/▶► (AMS*) buttons (page 24)
- ← (manual search) buttons (page 26) 8
- DISC SKIP button (page 18) 9
- △ OPEN/CLOSE button (page 18) 10
- 11 FADER button (page 44)
- 12 EDIT/TIME FADE button (page 36)
- CLEAR (program clear) button (page 34)
- CHECK (program check) button (page 34)
- 15 TIME button (page 22)
- 16 Disc tray (page 18)
- 17 Display window
- 18 PEAK SEARCH button (page 48)
- MUSIC SCAN button (page 42) 19
- 20 Remote sensor (CDP-C325M only)
- 21 REPEAT button (page 42)
- 22 TIMER switch (CDP-C325M only) (page 50)
- PHONE LEVEL control (CDP-C325M only) (page 18)
- 24 HEADPHONES jack (CDP-C325M only)
- * AMS is the abbreviation of Automatic Music Sensor.

Remote Commander



Refer to the pages indicated in () for details.

CDP-C325M only

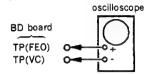
- 1 PROGRAM button (page 30)
- DISC SKIP button (page 18)
- >10 (over 10) button (page 24) 3
- 4 REPEAT button (page 42)
- 5 (stop) button (page 18)
- 6 MUSIC SCAN button (page 42)
- FADER button (page 44)
- ◄ ►► (manual search) buttons (page 26) 8
- 9 I◄◄ ▶► (AMS) buttons (page 24)
- 10 ► (play) button (page 18)
- 10 II (pause) button (page 18)
- 11 Numeric buttons (1-10) (page 24)
- 13 DISC 1-5 buttons (page 18)
- CONTINUE button (page 18)
- SHUFFLE button (page 28)

SECTION 2 ELECTRICAL BLOCK CHECKING

Note:

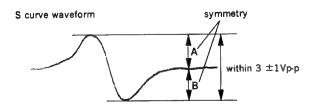
- CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
- 2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
- 3. Use the oscilloscope with more than $10M\Omega$ impedance.
- 4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



Procedure:

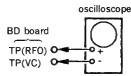
- 1. Connect oscilloscope to test point TP (FEO) on BD board.
- 2. Connect between test point TP (FES) and TP (VC) by lead wire.
- Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
- Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.



- 5. After check, remove the lead wire connected in step 2.

 Note: Try to mesure several times to make sure that the
- ratio of A: B or B: A is more than 10: 7.
 - Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

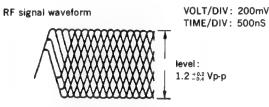


Procedure:

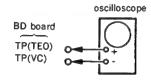
- 1. Connect oscilloscope to test point TP (RFO) on BD board
- 2. Turn Power switch on.
- 3. Put disc (YEDS-18) in and playback.
- Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note:

Clear RF signal waveform means that the shape "\rightharpoonum" can be clearly distinguished at the center of the waveform.



E-F Balance Check



Procedure:

- 1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
- 2. Connect oscilloscope to test point TP (TEO) on BD
- 3. Turn Power switch on.
- 4. Put disc (YEDS-18) in and playback.
- 5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

Traverse oscilloscope

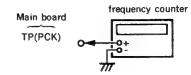


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure:

 Connect frequency counter to test point (PCK) with lead wire.



- 2. Turn Power switch on.
- 3. Confirm that reading on frequency counter is 4.3218MHz.

Focus/Tracking Gain

This gain has a margin, so even if it is slightly off.

There is no problem.

Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Locations:

[BD Board]

-Conductor Side

28 22 21 15 CNIO2

1CIO2

7 8 14

PES

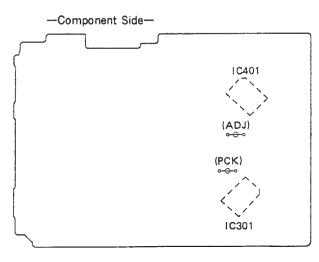
1ES

10 0 RF0

1ES

10 0 RF0

[MAIN Board]



POWE

3-1.

HP B

3-2. BA62

HARRA

CXA1

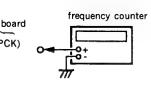
CXD2



SECTION 3 DIAGRAMS

equency Check

y counter to test point (PCK) with lead



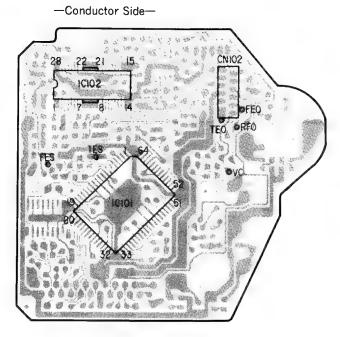
ing on frequency counter is 4.3218MHz.

in, so even if it is slightly off.

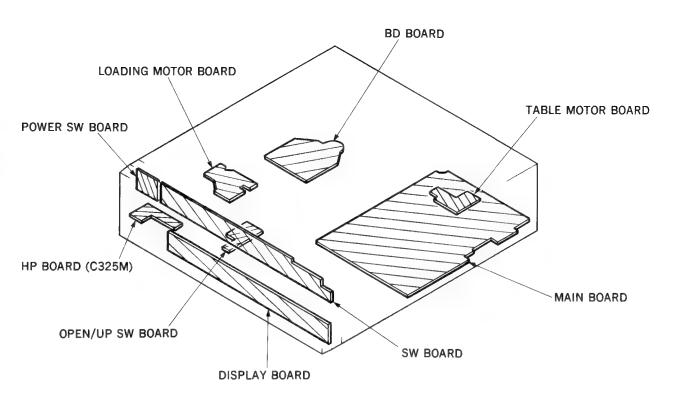
form, this adjustment.

hould be fixed to mechanical center ved and do not know original position.

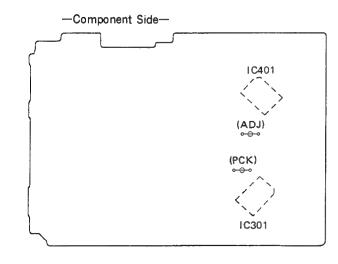
Adjustment Locations: (BD Board)



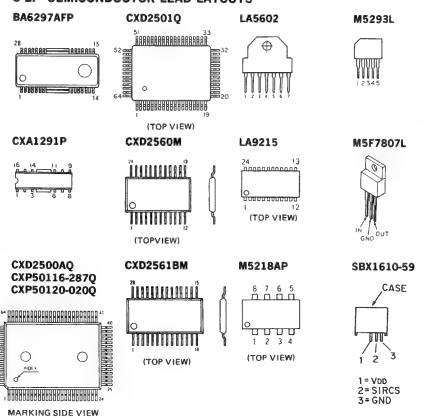
3-1. CIRCUIT BOARDS LOCATION

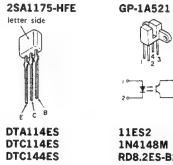


[MAIN Board]



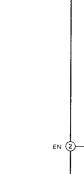
3-2. SEMICONDUCTOR LEAD LAYOUTS





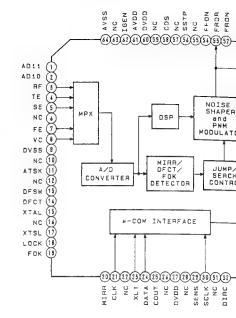
1N4148M RD8.2ES-B2

anode

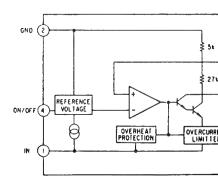


• IC Block Diagrams

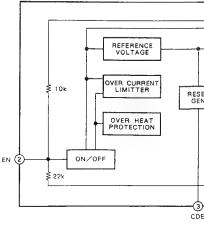
IC101 CXD2501Q



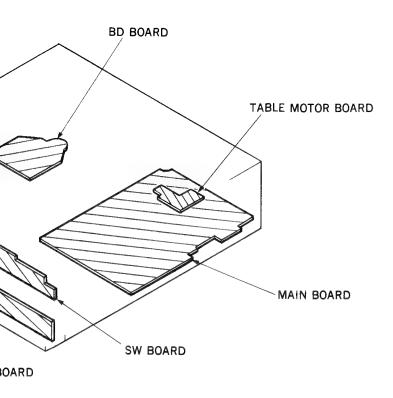
IC201 M5293L

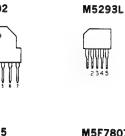


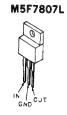
IC202 LA5602

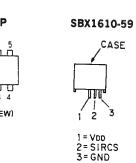


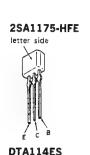
SECTION 3 DIAGRAMS



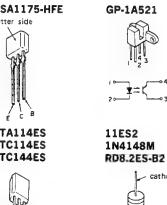






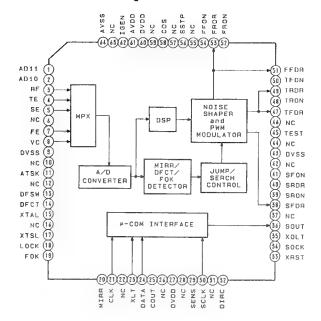




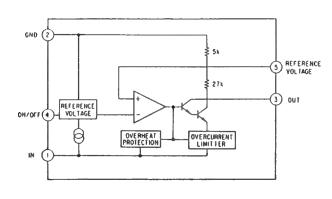


• IC Block Diagrams

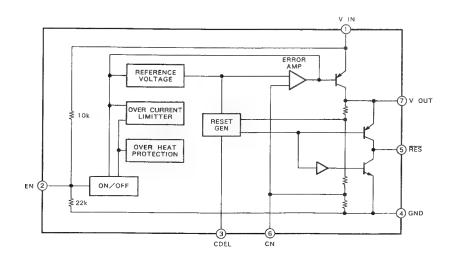
IC101 CXD2501Q



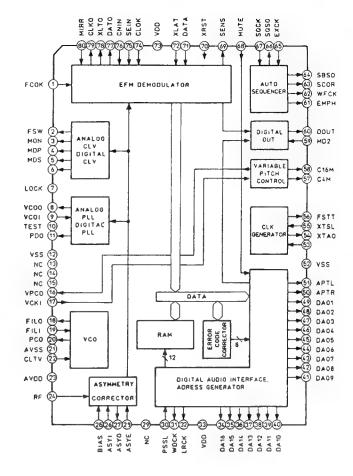
IC201 M5293L



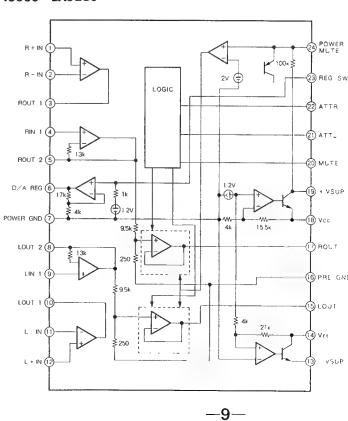
IC202 LA5602



IC301 CXD2500AQ



IC306 LA9215

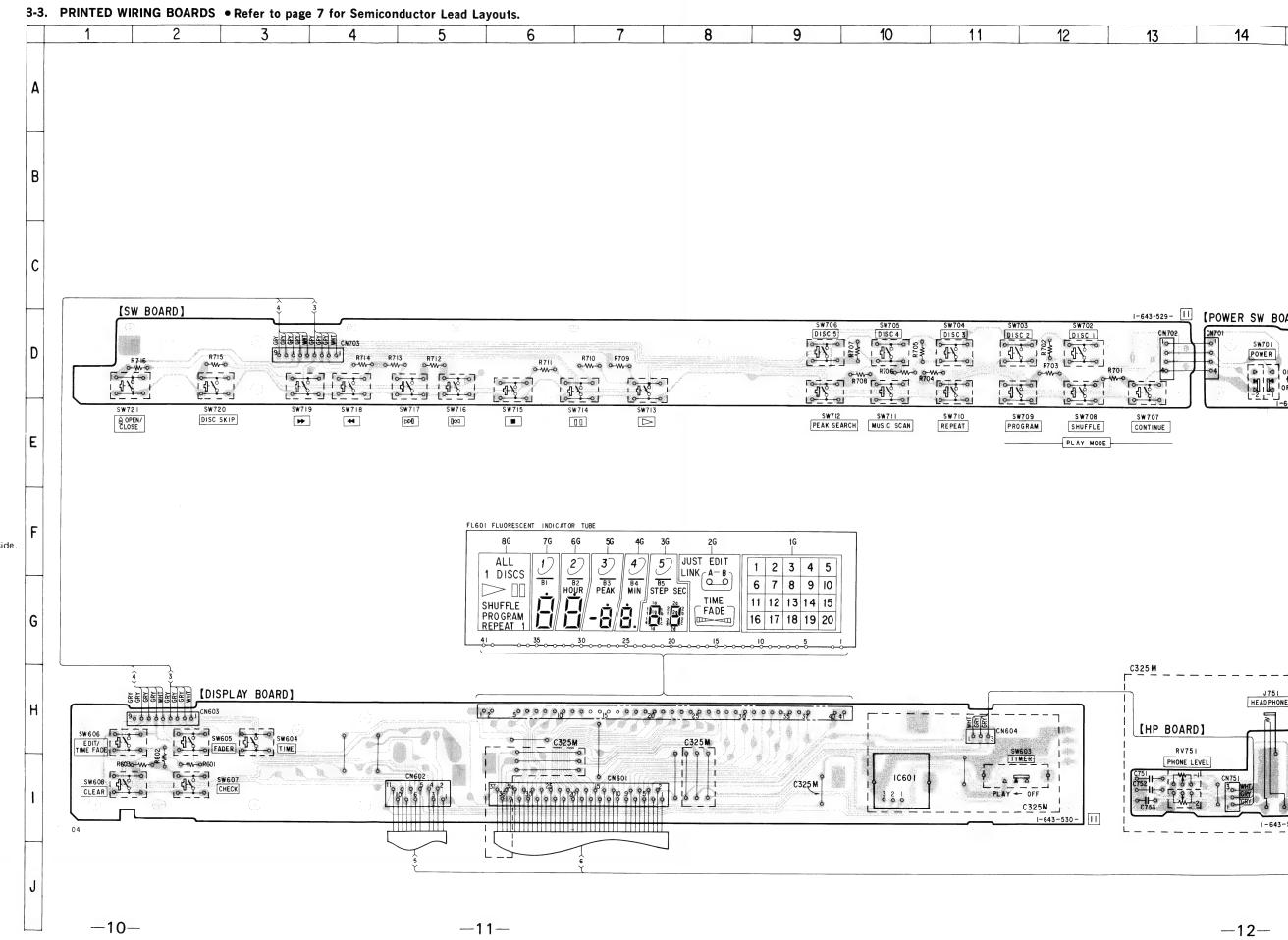


• Semiconductor Location

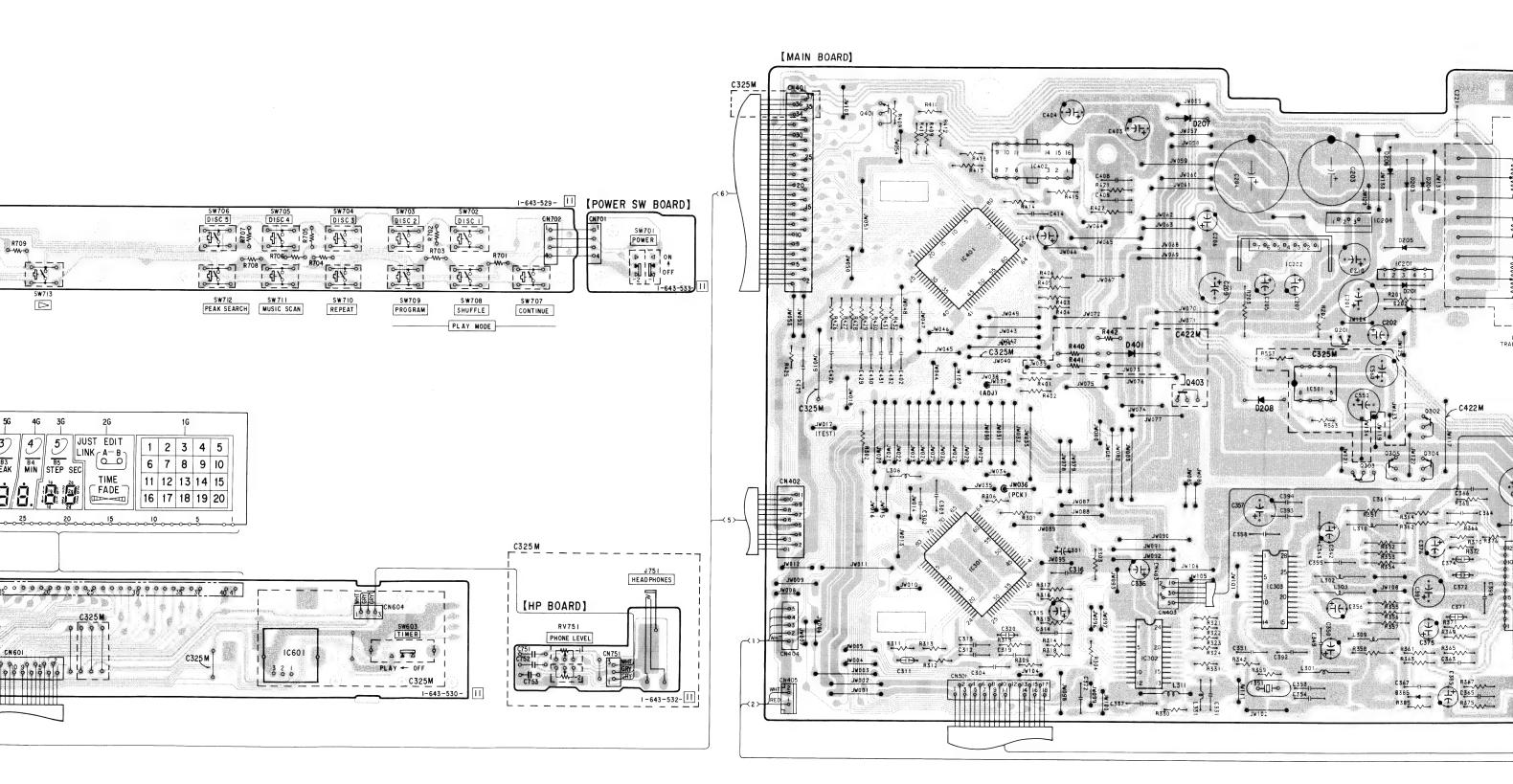
Ref. No.	Location
D201	D-23
D202	E-23
D203	C-23
D204	C-23
D205	D-23
D206	C-23
D207	C-20
D208	F-21
D385	I-23
D401	E-20
D701	G-30
IC101	C-28
IC102	B-28
IC201	D-23
IC202	D-22
IC204	D-22
IC301	H-18
IC302	I-20
IC303	H-21
IC306	H-24
IC401	D-18
IC402	C-19
IC501	F-22
IC601	I-10
Q201	E-22
Q302	F-23
Q303	G-22
Q304	G-23
Q305	G-23
Q401	C-17
Q403	F-20

Note:

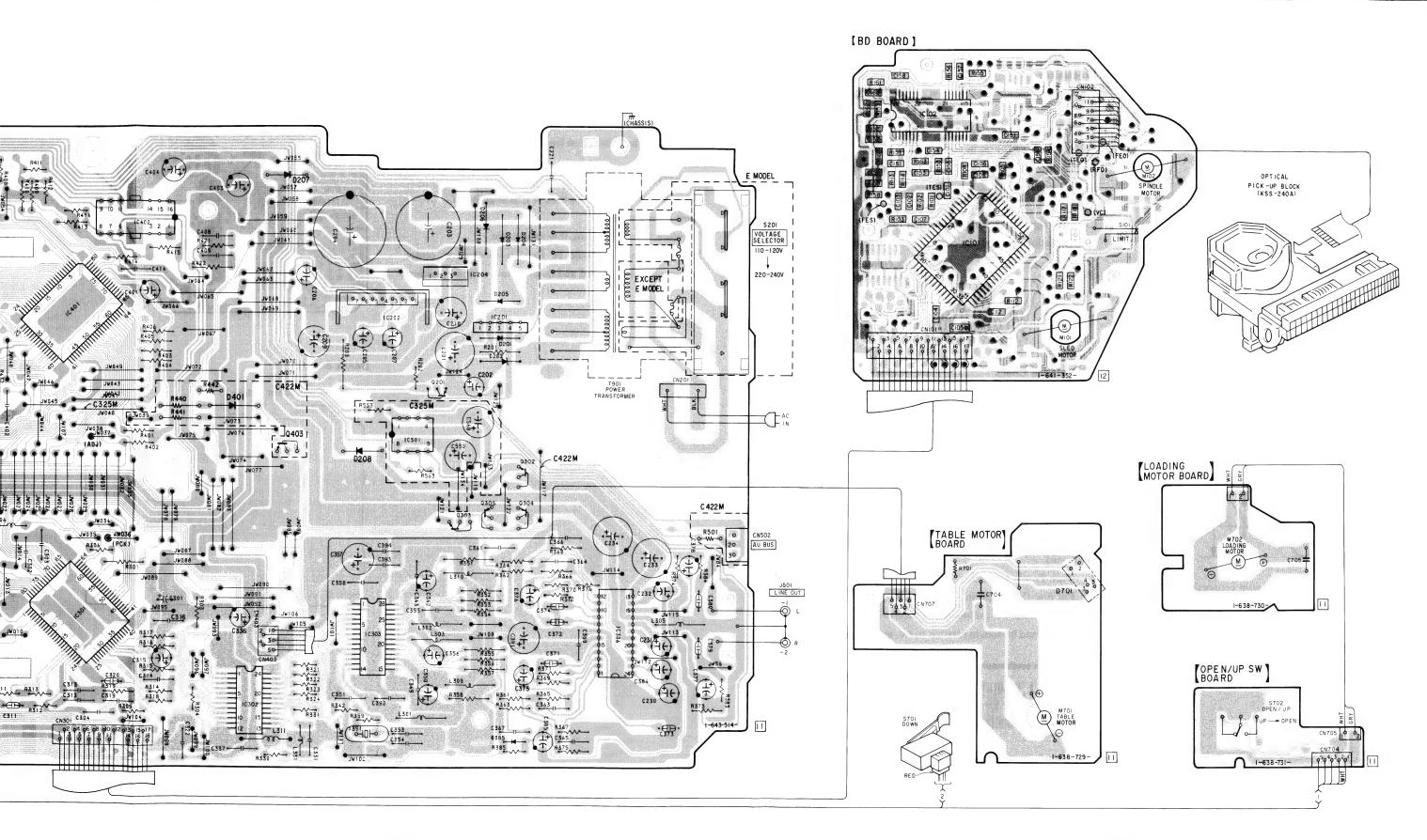
- c——: parts extracted from the component side.
- : Through hole.
- Pattern on the side which is seen.
- Pattern of the rear side.



7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24



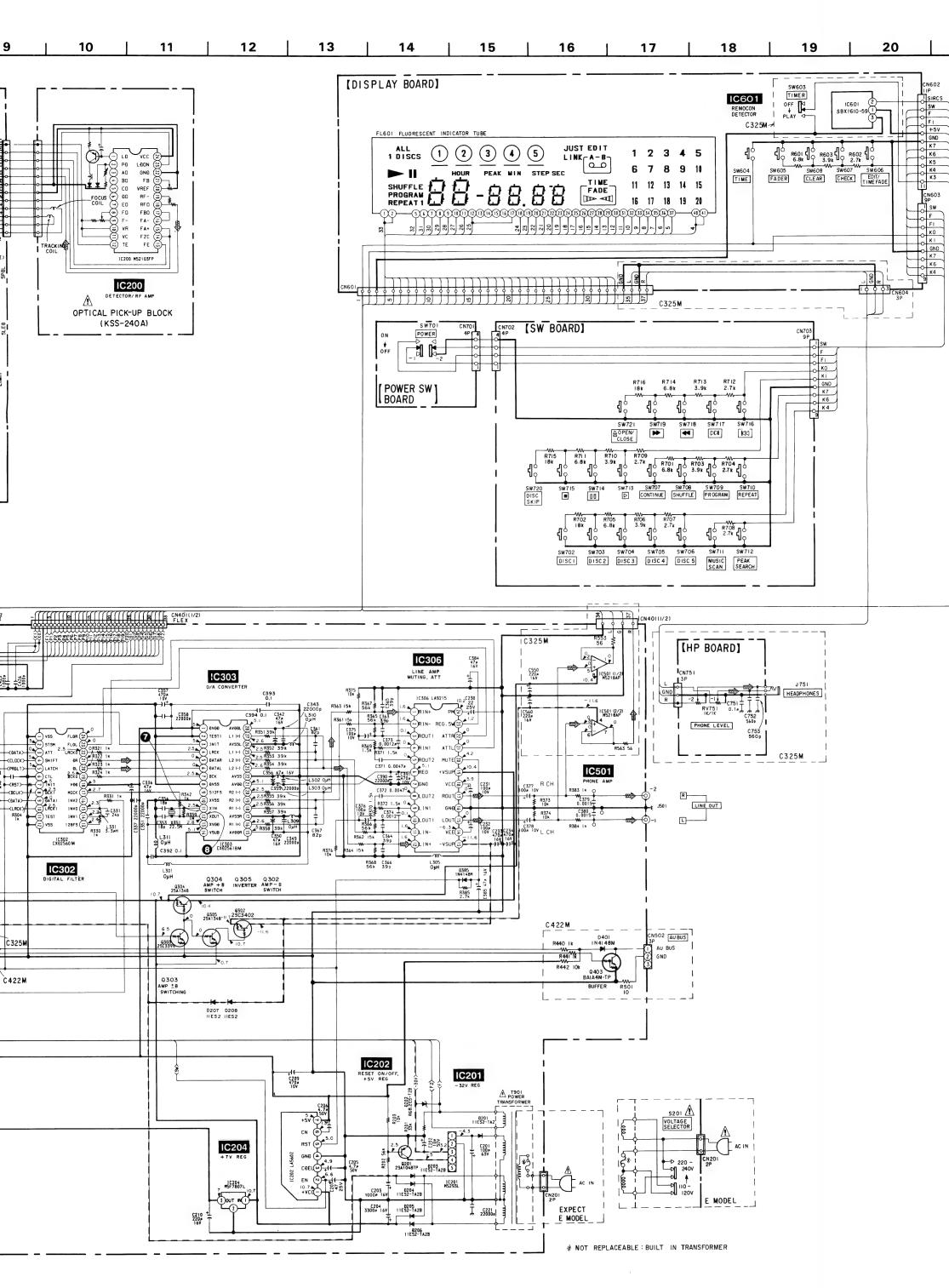
18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34

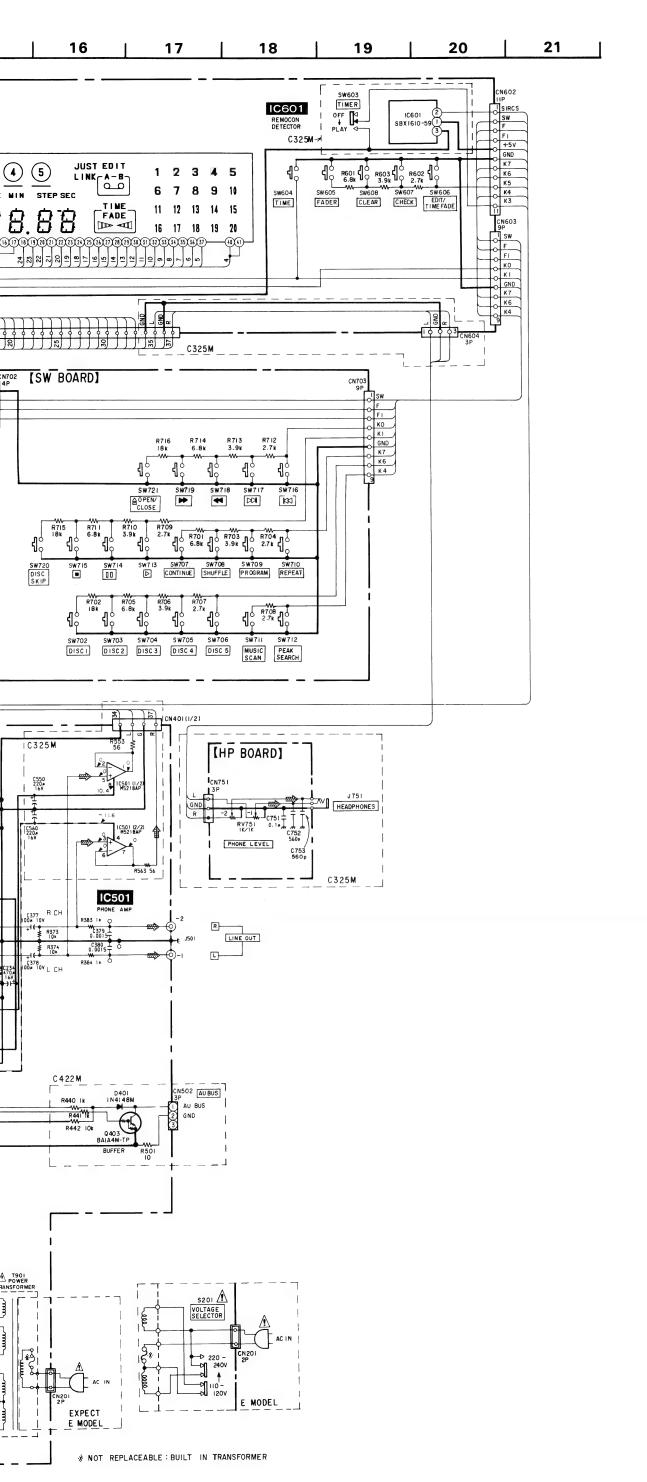


-16-

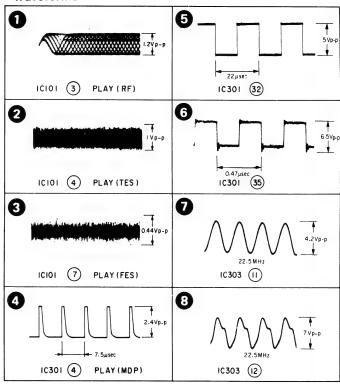
-15-

P





Waveforms



Note:

- All capacitors are in μF unless otherwise noted, pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/\!/_4\,W$ or less unless otherwise specified.

Note: The components identified by mark \bigwedge or dotted line with mark \bigwedge are critical for safety. Replace only with part number specified.

- : B+ Line
- ---: B- Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input Impedance 10MΩ)
 Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
 Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 - **☞** : CD

SECTION 4 EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.

 Color Indication of Appearance Parts Example: KNOB, BALANCE (WHITE)...(RED)

Parts Color Cabinet's Color

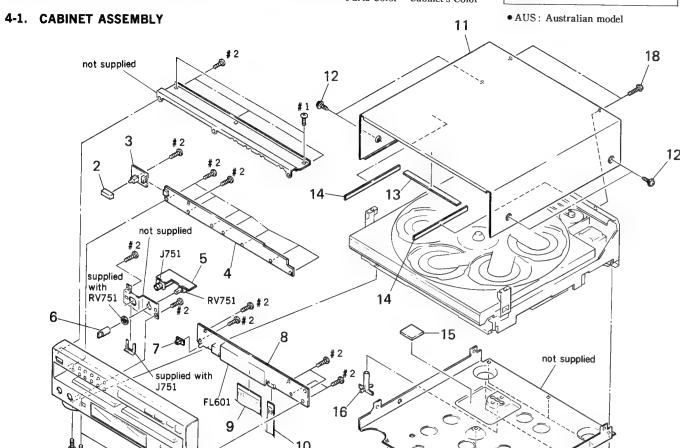
• Hardware (# mark) list is given in the last of this parts list.

The components identified by mark

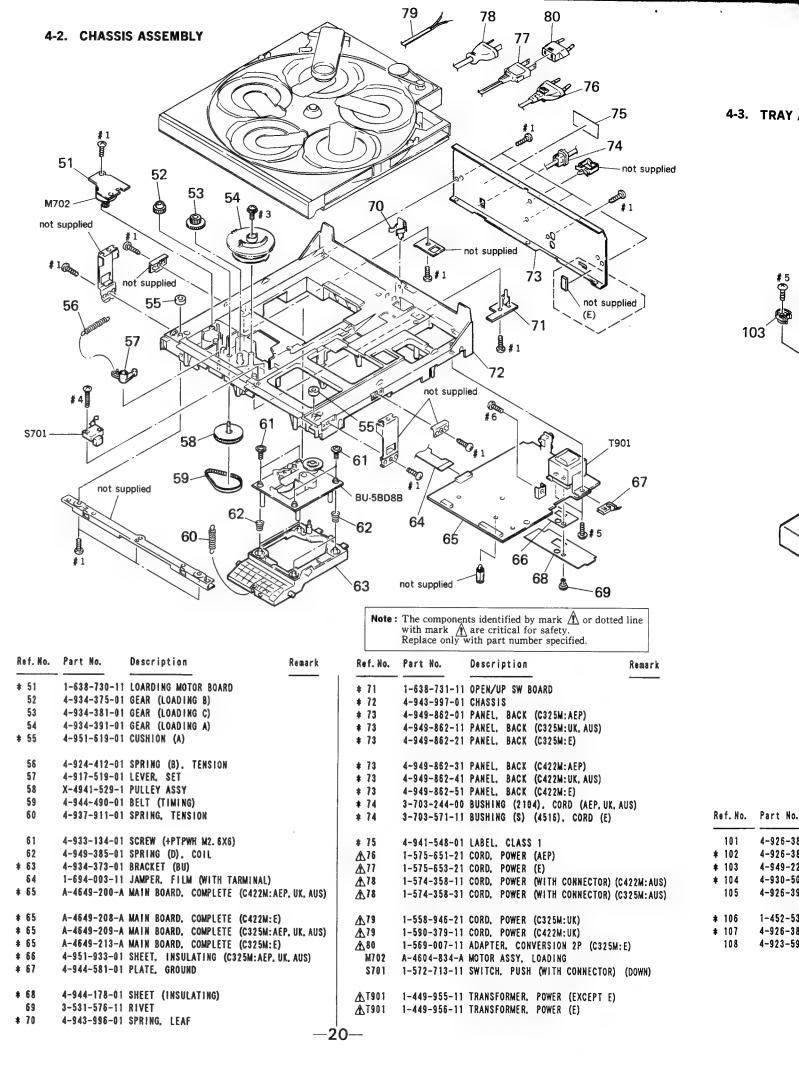
\(\frac{\Lambda}{\Lambda} \) or dotted line with mark

are critical for safety.

Replace only with part number specified.



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description Remark
1	X-4942-549-1	PANEL ASSY. FRONT (C325M)		* 11	4-943-992-01	CASE (C325M)
1	X-4942-550-1	PANEL ASSY, FRONT (C422M)		* 11	4-943-992-11	
2	4-951-115-01	BUTTON (POWER) (C325M)		12		SCREW (CASE) (M3X8)
2	4-951-115-11	BUTTON (POWER) (C422M)		* 13		CUSHION (PANEL)
* 3	1-643-533-11	POWER SW BOARD		* 14		CUSHION (CASE) (C325M)
* 4	1-643-529-11	SW BOARD		* 15	4-951-946-01	SHEFT
* 5	1-643-532-11	HP BOARD (C325M)		16		PLATE (TRANSPORT), LOCK
6	4-922-531-11	KNOB (A TYPE). LOV (C325M)		17	4-924-410-01	
7	4-922-518-01	KNOB (TIMER) (C325M)		18		SCREW (+BV 3X8)
* 8	1-643-530-11	DISPLAY BOARD		1		INDICATOR TUBE. FLUORESCENT
9	1-690-847-11	WIRE (FLAT TYPE) (37 CORE)	(C325M)	J751	1-691-878-11	JACK (LARGE TYPE) (HEAD PHONES) (C325)
9	1-690-848-11	WIRE (FLAT TYPE) (33 CORE)	(C422M)			RES. VAR. CARBON 1K/1K (PHONE LEVEL)
10	1-690-849-11	WIRE (FLAT TYPE) (11 CORE)	(o teem)		. 24, 001 11	(C325M)

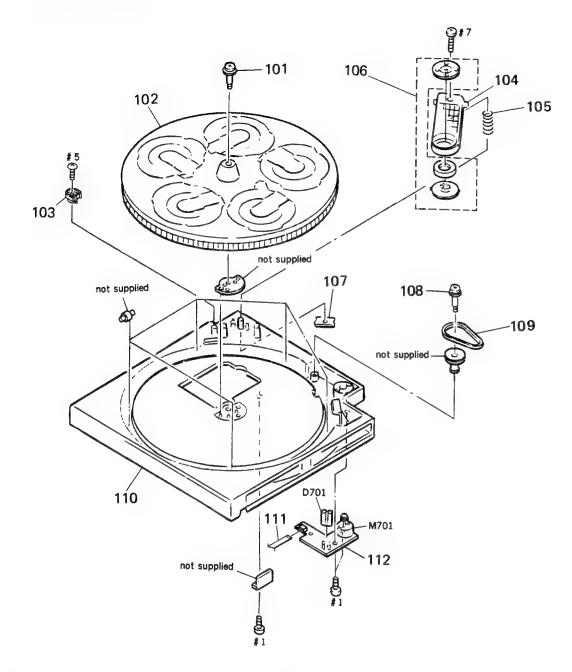


4-3. TRAY ASSEMBLY

--- not supplied

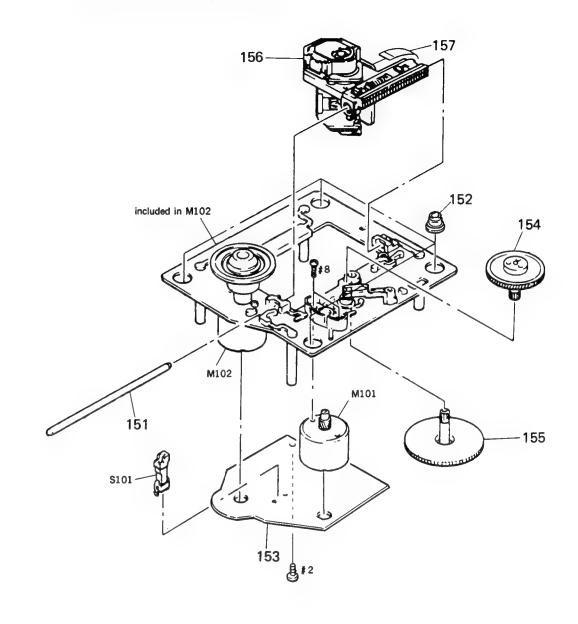
otted line

Remark



JK, AUS) E)	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R) (C422M: AUS) R) (C325M: AUS)	101 * 102 * 103 * 104 105	4-949-226-01 4-930-506-02	TABLE (B). DISK		109 110 * 110 111 * 112	4-951-121-11 1-590-849-11	BELT TABLE (A). DISK (C325M) TABLE (A). DISK (C422M) WIRE, FLAT TYPE (5 CORE) TABLE MOTOR BOARD	
25M: E)	* 106 * 107 108	1-452-538-11 4-926-388-01 4-923-597-01	BRACKET (ADJUSTMENT)		D701 M701		DIODE GP1A521 MOTOR ASSY, ROTARY	

4-4. OPTICAL PICK-UP BLOCK (BU-5BD8)



Note: The components identified by mark / or dotted line
with mark 🍂 are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	4-917-565-01	SHAFT, SLED		<u> </u>	8-848-144-11	DEVICE, OPTICAL KSS-240A	
152	4-951-940-01	INSULATOR (BU)		157	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
* 153 154	A-4649-199-A 4-917-567-01	BD BOARD, COMPLETE				MOTOR ASSY, SLED MOTOR ASSY, SPINDLE	
155		GEAR (P), FLATNESS				SWITCH, LEAF (LIMIT)	

SECTION 5 ELECTRICAL PARTS LIST

DISPLAY BD SW **POWER SW**

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS uF: μF

RESISTORS All resistors are in ohms METAL: Metal-film resistor METAL OXIDE: Metal Oxide-film resistor

F: nonflammable COILS
uH: µH
SEMICONDUCTORS

In each case, u: μ , for example: uA...: μ A..., uPA..., uPA..., uPB...: μ PB..., uPC...; μ PC..., uPD...: μ PD...

When indicating parts by reference number, please include the board

The components identified by mark or dotted line with mark are critical for safety.

Replace only with part number specified.

• AUS: Australian Model

Ref. No.	Part No.	Description		Rem	ark	Ref. No.	Part No.	Description			Remark
*	A-4649-199-A	BD BOARD, COMPI	.ETE			R112	1-216-049-00	METAL CHIP	1 K	5%	1/10W
		************				R113	1-216-077-00		15K	5%	1/10W
						R114	1-216-077-00	METAL CHIP	15K	5%	1/10W
		< CAPACITOR >			1	R117	1-216-077-00	METAL CHIP	15K	5%	1/10W
						R118	1-216-077-00	METAL CHIP	15K	5%	1/10W
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V						
C102	1-163-038-00		0. 1uF		25V	R121	1-216-077-00	METAL CHIP	15K	5%	1/10W
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	R122	1-216-077-00		15K	5%	1/10W
C104		CERAMIC CHIP	2. 2uF		167	R151	1-216-070-00		7. 5K	5%	1/10W
C105	1-135-155-21	TANTALUM CHIP	4. 7uF	10%	16V	R152	1-216-070-00	METAL CHIP	7. 5K	5%	1/10W
						R153	1-216-070-00	METAL CHIP	7. 5K	5%	1/10W
C106	1-164-346-11	CERAMIC CHIP	1uF		167						
C107		CERAMIC CHIP	2. 2uF		16V	R154	1-216-070-00	METAL CHIP	7. 5K	5%	1/10W
C108		CERAMIC CHIP	1uF		167	R155	1-216-070-00		7. 5K		1/10W
C112		CERAMIC CHIP	0. 1uF		25V	R156	1-216-070-00		7. 5K		1/10W
C151		CERAMIC CHIP	680PF	10%	50V	R157	1-216-085-00		33K	5%	1/10W
0101		02,11,111				R158	1-216-076-00		13K	5%	1/10W
0152	1-163-007-11	CERAMIC CHIP	680PF	10%	50V	11.00	1 210 010 00	merne our	1011	474	.,
C153		CERAMIC CHIP	0. 1uF		25V	R159	1-216-085-00	METAL CHIP	33K	5%	1/10W
C154	1-164-336-11		0. 33uF		25V	R160	1-216-081-00		22K	5%	1/10W
C155		CERAMIC CHIP	680PF	10%	507	R161	1-216-093-00		68K	5%	1/10W
C156		CERAMIC CHIP	680PF	10%	50V	R162	1-216-085-00		33K	5%	1/10W
0100	, 100 001 11	OLIVAMIO OIIII	***************************************	1000		R163	1-216-308-00		4. 7	5%	1/10W
C157	1-163-037-11	CERAMIC CHIP	0. 022uF	10%	25V	NIOS	1-210-300-00	METAL VIIII	7. (0.76	17 17 11
C158		CERAMIC CHIP	0. 022uF	10%	25V			< SWITCH >			
C159		CERAMIC CHIP	0. 015uF	5%	50V			V 01111011 7			
C160		CERAMIC CHIP	0. 0068uF	10%	50V	\$101	1_572_085_11	SWITCH, LEAF	/LIMITA		
C181		CERAMIC CHIP	0. 1uF	1070	25V		*******			****	*****
		< CONNECTOR >				*	1-643-530-11	DISPLAY BOAR			

		SOCKET. CONNECT			l	*	1-643-533-11	POWER SW BOA			
CN102	1-558-795-11	SOCKET, CONNECT	10K 12P					*********	**		
						*	1-643-529-11				
		< 10 >						******			
	8-752-344-48 8-759-071-79							< CONNECTOR	>		
,,,,,						* CN601	1-691-901-11	SOCKET, CONN	FCTOR (I	TYPF)	33P (C422M)
		< RESISTOR >			-		1-691-902-11				
		=					1-691-889-11				
R101	1-216-077-00	METAL CHIP	15K 5%	1/10W			1-568-941-11				
R102	1-216-097-00		100K 5%	1/10W			1-565-295-11		•	/	
R103	1-216-077-00		15K 5%	1/10W		7 911191	. 000 230 11	. 200, 000000	. 711		
R104	1-216-085-00		33K 5%	1/10W		* CN702	1-565-480-11	CONNECTOR. R	OARD TO R	OARD	4P
R105	1-216-097-00		100K 5%	1/10W			1-568-947-11			71110	••
11.00				.,		T VIIIV	. 000 341 11	in, winter	V.11 V1		

DISPLAY	POWER SW	SW HP	LOADING MOTOR
OPEN/UP	SW TABLE I	MOTOR	

<u>_</u>			JOTOK							
Ref. No	. Part No.	Description		Remark	Ref. No.	Part No.	Description			Remark
		< 10 >			SW7 15	1-554-303-2	1 SWITCH, TACTIL	- / - \		
ICEN	1 8-741-100-48	LO COVECEA	F0 /000F10		SW718	1-554-303-2	1 SWITCH, TACTIL	F (KM)		
1000	1 0-141-100-40	FIC SEXIOIU-	-59 (C325M)		SW717	1-554-303-2	1 SWITCH, TACTII	F (DO) 3		
		< FLUORESCENT	INDICATOR >		SW7 18	1-554-303-2	SWITCH. TACTIL	E (◀◀)		
					3#119	1-354-303-2	SWITCH, TACTIL	Ε (▶)		
FL60	1 1-519-721-11	INDICATOR TUB	E. FLUORESCE	NT	SW720	1-554-303-2	SWITCH, TACTIL	F (DISC	CK I D)	
		< RESISTOR >			SW/21	1-554-303-21	SWITCH, TACTIL	F (AAPE	W/CLOSE)	
		C IIICOTOTOR >			******	***********	*********	******	******	*****
R601			6.8K 5%	1/4W	*	1-643-532-11	HP BOARD (C325	ııı		
R602		CARBON	2. 7K 5%	1/4W	1	1 040-002-11	######################################			
R603 R701	1-249-424-11 1-249-427-11	CARBON	3. 9K 5%	1/4W				**		
R702	1-249-432-11	CARBON	6.8K 5% 18K 5%	1/4W 1/4W	ĺ		< CAPACITOR >			
			, o. c. o, s	17 411	C751	1-164-159-11	050444.0			
R703	1-249-424-11	CARBON	3. 9K 5%	1/4W	0/31	1-104-139-11	(C325M)	0. 1uF		50V
R704 R705	1-249-422-11	CARBON	2. 7K 5%	1/4W	C752	1-162-291-31	CERAMIC	560PF	10%	E 0.1/
R706	1-249-427-11 1-249-424-11	CARBON	6. 8K 5%	1/4W			(C325M)	00011	10%	50 V
R707	1-249-422-11		3. 9K 5% 2. 7K 5%	1/4W 1/4W	C753	1-162-291-31		560PF	10%	50V
				17 911	İ		(C325M)			
R708	1-249-422-11	CARBON	2.7K 5%	1/4W			< JACK >			
R709 R710	1-249-422-11	CARBON	2. 7K 5%	1/4W			· vack /			
R711	1-249-424-11 1-249-427-11	CARBON	3. 9K 5%	1/4W	J751	1-691-878-11	JACK (LARGE TYP	E) (HEADE	HONES) (C	3 2 5M)
R7 12	1-249-422-11	CARBON	6.8K 5% 2.7K 5%	1/4W 1/4W						o z omj
			2114 0/	1/411			< VARIABLE RESI	STOR >		
R713	1-249-424-11	CARBON	3.9K 5%	1/4W	RV751	1-241-031-11	RES, VAR. CARBOI	1 1V/1V /	OHANG LEW	
R714 R715	1-249-427-11 (1-249-432-11 (CARBON	6. 8K 5%	1/4W	ì		(C325M)			
R716	1-249-432-11	CARRON	18K 5% 18K 5%	1/4W 1/4W	******	**********	*******	******	********	****
			101 3/1	17411	*					
	•	SWITCH >			•		LOADING MOTOR 80 ********			
SW603	1-570-157-51 8	SWITCH CLINE	/TIUED\ /000			1-638-731-11	OPEN/UP SW BOARD	***		
SW604	1-554-303-21 8	SWITCH, SLIDE I	(TIMEK) (G325 F /TIME)	M)			******** *****			
SW605	1-554-303-21 S	SWITCH, TACTILE	(FADER)		*		TABLE MOTOR BOAR			
2M808	1-554-303-21 S	WITCH, TACTILE	(EDIT/TIME	FADE)			***********	*		
2MPC/	1-554-303-21 S	WITCH, TACTILE	(CHECK)		ļ	<	CAPACITOR >			
SW608	1-554-303-21 S	WITCH TACTULE	(CLEAD)							
SW701	1-572-714-11 S	WITCH, PUSH (P	OWER)		C704	1-161-375-00 C). 0022uF	20%	50V
SW702	1-554-303-21 \$	WITCH, TACTILE	(DISC 1)		C705	1-161-375-00 C	ERAMIC (). 0022uF	20%	50V
SW/U3	1-554-303-21 S	WITCH, TACTILE	(DISC 2)			,	CONNECTOR >			
3M/U4	1-554-303-21 5	WITCH, TACTILE	(DISC 3)							
SW705	1-554-303-21 5	WITCH, TACTILE	(DISC 4)		* CN705	1-573-383-11 P	IN. CONNECTOR (P	C BOARD)	2P	
SW708	1-554-303-21 SY	WITCH, TACTILE	(D1SC 5)		* CN/0/ 1	1-573-044-11 S	OCKET. CONNECTOR	5P		
SW707	1-554-303-21 SV	WITCH, TACTILE	(CONTINUE)				DIODE >			
SW709	1-554-303-21 SV	WITCH, TACTILE	(SHUFFLE)		,	•	01000			
٧ 3	1-554-303-21 SY	HIJON, TACTILE	(PRUGKAM)		D701 8	3-719-970-19 D	ODE GP1A521			
SW710	1-554-303-21 SW	VITCH, TACTILE	(REPEAT)				05010745			
SW/11	1-554-303-21 SW	VITCH, TACTILE	(MUSIC SCAN)		1	<	RESISTOR >			
SW/12	1-554-303-21 SW	VITCH, TACTILE	(PEAK SEARCH)	R701 1	-249-416-11 CA	RRON	20 5%	4 / / / /	
SW7 14	1-554-303-21 SW	TITCH, TACTILE	(▷)					20 5%	1/4W	
31114	1-554-303-21 SW	THEM, TACTILE	(111)							

LOADING MOTOR OPEN/UP SW TABLE MOTOR MAIN

Ref. No.	Part No.	Description	_	R	emark	Ref. No.	Part No.	Description		R	emark
		< SWITCH >				C353	1-162-205-31	CERAMIC	18PF	5%	50 V
						C354	1-162-205-31	CERAMIC	18PF	5%	50V
\$702	1-571-300-21	-21 SWITCH, ROTARY (OPEN/UP)				C355	1-161-494-00	CERAMIC	0. 022uF		25V
***************************************				C356	1-126-022-11	ELECT	47uF	20%	16V		
						C357	1-124-997-11		470uF	20%	107
*	A-4649-200-A	MAIN BOARD.	COMPLETE (C42	2M: AEP.	UK. AUS)				41007	2070	
*			COMPLETE (C42	-	•,,	C358	1-161-494-00	CERANIC	0. 022uF		25V
*			COMPLETE (C32		IIK AIIC)	C361	1-162-280-31		82PF	10%	50V
*			COMPLETE (C32		uk, huu,	C363	1-162-213-31		39PF	5%	50 V
•	M-4043-213-N		**********			C364					
		*********	*******	*****	******		1-162-213-31		39PF	5%	50 V
	7 600 540 04	CODEW IDUTT	240 (6)			C365	1-162-213-31	CERAMIC	39PF	5%	50 V
	7-682-548-04	SUREM TOVII	3X8 (S)					APR.444.0			
						C366	1-162-213-31		39PF	5%	50V
		< CAPACITOR	>			C367	1-162-280-31		82PF	10%	50 V
						C371	1-130-479-00		0.0047uF	5%	50 V
C201	1-124-572-11	ELECT	100uF	20%	63V	C372	1-130-479-00		0.0047uF	5%	50 V
C202	1-126-059-11	ELECT	10uF	20%	50V	C373	1-130-472-00	MYLAR	0.0012uF	5%	50 V
C203	1-124-360-00	ELECT	1000uF	20%	167						
C204	1-124-887-00	ELECT	3300uF	20%	16V	C374	1-130-472-00	MYLAR	0.0012uF	5%	50 V
C205	1-126-163-11	ELECT	4. 7uF	20%	50V	C375	1-124-994-11		100uF	20%	107
						C376	1-124-994-11		100uF	20%	107
C206	1-126-163-11	FLECT	4. 7uF	20%	50V	C377	1-124-994-11		100uF	20%	107
C207	1-124-910-11		47uF	20%	50V	C378	1-124-994-11		100uF	20%	107
C209	1-124-997-11		470uF	20%	107	0010	1 124 334 11	2201	10001	20%	101
C210			220uF	20%		C379	1-130-473-00	MVIAD	0.00155	EN	EAV
	1-126-024-11			20%	16V				0. 0015uF	5%	50V
C221	1-161-494-00	CERAMIC	0. 022uF		25V	C380	1-130-473-00		0. 0015uF	5%	50V
						C384	1-126-022-11		47uF	20%	16V
C230	1-126-049-11		22uF	20%	25V	C385	1-126-022-11		47uF	20%	167
C231	1-124-994-11		100uF	20%	107	C390	1-161-494-00	CERAMIC	0. 022uF		25V
C232	1-124-994-11	ELECT	100uF	20%	107						
C233	1-126-012-11	ELECT	470uF	20%	167	C391	1-124-997-11	ELECT	470uF	20%	10 V
C234	1-126-012-11	ELECT	470uF	20%	16V	C392	1-164-159-11	CERAMIC	0. 1uF		50V
						C393	1-164-159-11	CERAMIC	0. 1uF		50V
C301	1-126-022-11	ELECT	47uF	20%	167	C394	1-164-159-11	CERAMIC	0. 1uF		50V
C302	1-161-494-00	CERAMIC	0. 022uF		25V	C401	1-126-022-11	ELECT	47uF	20%	16V
C303	1-161-494-00		0. 022uF		25V						
C304	1-164-159-11		0. 1uF		50V	C402	1-161-494-00	CERAMIC	0. 022uF		25V
C311	1-130-491-00		0. 047uF	5%	50V	C403	1-126-023-11		100uF	20%	167
0011	1 100 431 00	MI CAN	V. V4101	0,4	***	C404	1-126-023-11		100uF	20%	167
C312	1-161-374-11	CEDAMIC	0. 0015uF	20%	50V	C408	1-164-159-11		0. 1uF	20%	50V
				20%		C409	1-164-159-11		0. 1uF		50V
C313	1-161-494-00		0. 022uF		25V	0403	1-104-133-11	CERAMIC	v. fur		304
C314	1-162-306-11		0. 01uF	20%	167	0.41.4	1 161 404 00	00011110			
C315	1-126-300-11		0. 47uF	20%	50V	C414	1-161-494-00		0. 022uF		25V
C316	1-161-494-00	CERAMIC	0. 022uF		25V	C425	1-162-294-31		0.001uF	10%	50V
						C426	1-162-294-31		0. 001uF	10%	50V
C319	1-162-282-31	CERAMIC	100PF	10%	50V	C429	1-162-294-31		0.001uF	10%	50V
C320	1-130-483-00	MYLAR	0. 01uF	5%	50V	C430	1-162-294-31	CERAMIC	0.001uF	10%	50 V
C322	1-164-159-11	CERAMIC	8. 1uF		50V						
C331	1-162-208-31	CERAMIC	24PF	5%	50V	C431	1-162-294-31	CERAMIC	0.001uF	10%	50V
C336	1-126-022-11		47uF	20%	16V	C432	1-162-294-31	CERAMIC	0.001uF	10%	50V
			-			C550	1-126-024-11	ELECT	220uF	20%	167
C337	1-161-494-00	CERAMIC	0. 022uF		25V			(C325M)	- "		
C342	1-126-022-11		47uf	20%	167	C560	1-126-024-11		220uF	20%	16V
C342	1-161-494-00		0. 022uF	24/4	257	,,,,		(C325M)		_ •,•	, • •
			0. 022uF					, n			
C349	1-161-494-00			902	25V			< CONNECTOR >			
C350	1-126-022-11	CLECI	47uf	20%	16V			· COUNTROLOU /			
			0. 022uf			+ 011001	1 570 047 11	PIN. CONNECTOR	/DO DO LDD)	40	
C351	1-161-494-00				25V	X [:M/II]					

MAIN

Ref. N	o. Part No.	Description		Remark	Ref h	io. Part No.	D				
+ CN3	01 1-601 205	II COOKET OAN				- Tait No.	Description				Remark
* CN4	01 1-691-895-	II SOCKEI, CON! II SOCKET CON!	NECTOR (L TYPE) NECTOR (L TYPE)	189			< TRANSISTOR	>			
# UN41	1-031-305-	II SOCKET. CONN	HECTOR (1 TYPE)	37P (COOKIN							
# UN4(JZ [-69]-889-]	II SOCKET, CONN	ECTOR (1 TYPE)	11P	020	- 100 110 11	TRANSISTOR	2SA1	175-HF	E	
* CN40	03 1-568-824-1	1 SOCKET, CONN	IECTOR 5P	•••	Q30 Q30		TRANSISTOR	DTC11			
					030		IRANSISTOR	DTC14			
* CN40	14 1-568-943-1	1 PIN. CONNECT	OR 5P		030			DTA11			
# CN50	12 1-565-561-1	1 PIN, CONNECT	OR 3P (AU BUS)	(C422M)		· · · · · · · · · · · · · · · · · · ·	INMISTOR	DTA11	455		
		< DIODE >			040		TRANSISTOR	DTC14	4FS		
		V DIODE >			040	8-729-900-80				C422M)	
D201	8-719-200-8	2 DIODE 11ES	2						•		
D202	8-719-110-0	8 DIODE RDS.	2ES-B2				< RESISTOR >				
D203		2 DIODE 11ES:	2		R201	1-249-435-11	CARRON				
D204		2 DIODE 11ES			R202		CARBON	33K		1/4W	
D205	8-719-200-8	2 DIODE 11ES2	2		R203	1-249-429-11	CARRON	56K		1/4W	
D206	0 710 000 0	DIODE ALCO			R301	1-249-417-11	CARRON	10K	5% 5%	1/4W	
D200	8-719-200-8: 8-719-200-8:	2 DIODE 11ES2			R302	1-249-417-11	CARBON	1 K	5%	1/4W	
D208	8-719-200-82	2 DIODE 11ES2						1 N	3/8	1/4W	
D385	8-719-987-63	DIODE 11ES2 DIODE 1N414			R303		CARBON	1 K	5%	1/4W	
D401	8-719-987-63		8M (C422M)		R304	1-249-417-11	CARBON	1 K	5%	1/4W	
		, DIODE 18414	om (C422M)		R306	1-249-413-11	CARBON	470	5%	1/4W	
		< 10 >			R309	1-249-405-11	CARBON	100	5%	1/4W	
					R311	1-249-423-11	CARBON	3. 3K	5%	1/4W	
IC201	8-759-633-42	IC M5293L			R312	1-249-429-11	CADDON				
IC202	8-759-061-65	IC LA5602			R313	1-249-423-11	CARBON	10K	5%	1/4W	
1C204	8-759-604-86				R314	1-249-429-11	NOGRAC NORSAC	3. 3K		1/4W	
10301	8-752-337-26				R315	1-249-417-11	CARBON	10K 1K	5% 5%	1/4W	
10302	8-752-342-65	IC CXD2560M			R316	1-249-417-11 (CARBON	1K	5%	1/4W 1/4W	
IC303	8-752-351-19	IC CXD2561BA						•••	•/•	17411	
1C306	8-759-061-66	IC LA9215	4		R317	1-249-419-11 0	ARBON	1. 5K	5%	1/4W	
IC401	8-752-837-03		-020Q (C422M)		R318	1-249-441-11 0	ARBON	100K	5%	1/4W	
IC401	8-752-837-01	IC CXP50116-	-2870 (C325M)		R319 R321	1-247-903-00 C	ARBON	IM	5%	1/4W	
1C402	8-759-821-32	IC CXA1291P	(002011)		R322	1-249-417-11 C 1-249-417-11 C		1 K	5%	1/4W	
10504						1 143 411-11 6	ANDUN	1 K	5%	1/4W	
10501	8-759-634-51	IC M5218AP ((C325M)		R323	1-249-417-11 C	ARBON	1 K	5%	1/44	
		4 14AV 5			R324	1-249-417-11 C		1 K	5%	1/4W 1/4W	
		< JACK >			R330	1-249-417-11 C	ARBON	1 K	5%	1/4W	
J501	1-569-442-11	JACK, PIN 2P (LINE OUT		R331	1-249-417-11 C	ARBON	1 K	5%	1/4W	
	7 442 11	onon, Tim 2F (LIKE UUI)		R342	1-249-417-11 C/	ARBON	1 K	5%	1/4W	
		< COIL >			R351	1-240-426 11 04	IDOON				
					R352	1-249-436-11 CA 1-249-436-11 CA		39K		1/4W	
L301	1-412-473-21	INDUCTOR	OuH	ĺ	R353	1-249-436-11 CA			5%	1/4W	
L302	1-412-473-21	NDUCTOR	0uH	ſ	R354	1-249-436-11 CA	RBON 3		5% 5%	1/4W	
L303 L305	1-412-473-21	INDUCTOR	OuH		R355	1-249-436-11 CA			5%	1/4W 1/4W	
L306	1-412-473-21 1-412-297-11	INDUCTOR	Ouff	ľ				J - 4		1/ 7/1	
	. 716 231-11	ואטניוטע	3. 3uH	1	R356	1-249-436-11 CA	RBON 3	9 K	5%	1/4W	
L309	1-412-473-21	NDUCTOR	OuH		R357	1-249-436-11 CA	RBON 3			1/4W	
L310	1-412-473-21	NDUCTOR	Out Out	- 1	R358 R359	1-249-436-11 CAI			5%	1/4W	
L311	1-412-473-21	NDUCTOR	OuH	1	R361	1-247-903-00 CAI				1/4W	
L331	1-412-297-11	NDUCTOR	3. 3uH		11001	1-249-431-11 CAI	TBUN 1	5K 5	5%	1/4W	
					R362	1-249-431-11 CAF	RON 1		v	1 / 110	
					R363	1-249-431-11 CAR	BON 1			1/4W	
					R364	1-249-431-11 CAR				1/4W 1/4W	
				- 1						1/ 411	

MAIN

	Part No.	Description				Remark -	1101.110.	Part No.	Description Re
R365	1-249-438-11	CARBON	56K	5%	1/4W				< SWITCH >
R366	1-249-438-11	CARBON	56K	5%	1/4W				
R367	1-249-438-11		56K	5%	1/4W		♠ \$201	1_671_799_11	SWITCH. VOLTAGE SELECTION
R368	1-249-438-11		56K	5%	1/4W		₩3201	1-311-122-11	
R369	1-249-419-11		1. 5K		1/4W				(VOLTAGE SELECTOR) (E)
1100	1-243-413-11	CARDON	I. JA	376	1/411				
0070		AADDAN	4 FW	F0/	4 / 4111				< CRYSTAL >
R370	1-249-419-11		1. 5K		1/4W				
R371	1-249-419-11		1. 5K		1/4W				VIBRATOR, CRYSTAL (22.5MHz)
R372	1-249-419-11		1. 5K		1/4W		*******	*******	**************
R373	1-249-429-11	CARBON	10K	5%	1/4W				
R374	1-249-429-11	CARBON	10K	5%	1/4W				MISCELLANEOUS

R375	1-249-429-11	CARBON	10K	5%	1/4W				
R376	1-249-429-11	CARBON	10K	5%	1/4W		9	1-600-947-11	WIRE (FLAT TYPE) (37 CORE) (C325M)
R383	1-249-417-11		1 K	5%	1/4W		9		
R384	1-249-417-11		1K	5%	1/4W		1		WIRE (FLAT TYPE) (33 CORE) (C422M)
R385	1-249-422-11		2. 7K		1/4W		10		WIRE (FLAT TYPE) (11 CORE)
1100	1-643-466-11	ANDON	4. IK	376	1/ 917		64		JAMPER, FILM (WITH TARMINAL)
D404	1 040 400	CARRON	004	EA.	4 2 41		1 1 1 1 1 1 1 1 1 1	1-5/5-651-21	CORD, POWER (AEP)
R401	1-249-433-11		22K	5%	1/4W				
R402	1-249-433-11		22K	5%	1/4W		<u> </u>	1-575-653-21	CORD. POWER (E)
R403	1-249-425-11		4. 7K		1/4W		<u> </u>	1-574-358-11	CORD. POWER (WITH CONNECTOR) (C422)
R404	1-249-425-11	CARBON	4. 7K	5%	1/4W		1	1-574-358-31	CORD. POWER (WITH CONNECTOR) (C325M
R405	1-249-425-11	CARBON	4. 7K	5%	1/4W		₹ 79		CORD. POWER (C325M:UK)
							<u>₹</u> 79		CORD, POWER (C422M:UK)
R406	1-249-425-11	CARBON	4. 7K	5%	1/4W		22.0		001.01 TOTEL (0422111.0X)
R408	1-249-441-11	CARBON	100K		1/4W		∱ 80	1_660_007_11	ADAPTER, CONVERSION 2P (C325M:E)
R409	1-247-864-11		24K	5%	1/4W		* 106		
R410	1-247-880-11		110K		1/4W			1-452-538-11	= -
R411	1-249-440-11		82K	5%	1/4W		111		WIRE, FLAT TYPE (5 CORE)
11-7-1-1	1-243-440-11	UNROUN	UZK	3/4	17 411	i	<u></u> 156		DEVICE, OPTICAL KSS-240A
D.410	1 0/7 076 11	O & D D O W	254	FN	4 / 411	İ	157	1-5/5-001-11	WIRE, FLAT TYPE (12 CORE)
R412	1-247-876-11		75K	5%	1/4W				
R413	1-249-440-11		82K	5%	1/4W		M101		MOTOR ASSY. SLED
R414	1-247-874-11		62K	5%	1/4W		M102	X-4917-523-3	MOTOR ASSY. SPINDLE
R415	1-249-435-11		33K	5%	1/4W		M701	A-4604-585-A	MOTOR ASSY. ROTARY
R416	1-247-878-00	CARBON	91K	5%	1/4W		M702		MOTOR ASSY. LOADING
							\$701		SWITCH, PUSH (WITH CONNECTOR) (DOW
R421	1-249-393-11	CARBON	10	5%	1/4W				The same of the sa
R422	1-249-393-11	CARBON	10	5%	1/4W		 ↑T901	1-449-955-11	TRANSFORMER, POWER (EXCEPT E)
R425	1-249-429-11		10K	5%	1/4W		Æ1901		TRANSFORMER, POWER (E)
R426	1-249-429-11		10K	5%	1/4W		₹₹1301	1-443-330-11	INDIGOTORMEN, FUNER (E)
R427	1-249-429-11		10K	5%	1/4W		*****	**********	****
1741	1 1-634 653	VAUDVA	IVK	976	1/411		******	**********	********************
R428	1-249-429-11	CADDON	104	5%	1 / 110				
			10K		1/4W	İ			
R429	1-249-429-11		10K	5%	1/4W	[
R430	1-249-429-11		10K	5%	1/4W				
	1-249-429-11		10K	5%	1/4W				
R432	1-249-429-11	CARBON	10K	5%	1/4W				
R440	1-249-417-11	CARRON	1 K	5%	1/AW	(C422M)			
R441	1-249-417-11		1 K	5%					
R442	1-249-429-11		10K			(C422M)			
				5%		(C422M)			
R501	1-249-393-11		10	5%		(C422M)			
R553	1-249-402-11	CARBON	56	5%	1/4W	(C325M)			
R563	1-249-402-11	CARRON	56	5%	1 / 111	(C325M)			

Note: The components identified by mark ⚠ or d₀ tted line with mark ⚠ are critical for safety.

Replace only with part number specified.

#1

Ref. No. Part No. Description Remark ACCESSORIES & PACKING MATERIALS ***************** 1-558-271-11 CORD, CONNECTION (C325M:AEP) 1-558-271-11 CORD. CONNECTION (C422M:AEP) 1-693-053-11 REMOTE COMMANDER (RM-D325) (C325M) 2-181-754-01 COVER, BATTERY (C325M) 3-754-847-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) 3-754-847-41 MANUAL, INSTRUCTION (GERMAN, DUTCH. SWEDISH, ITALIAN) (AEP) 4-944-040-01 CUSHION (FRONT) 4-944-041-01 CUSHION (REAR) 4-951-269-11 INDIVIDUAL CARTON (C325M) 4-951-269-21 INDIVIDUAL CARTON (C422M: AEP. AUS)

HARDWARE LIST

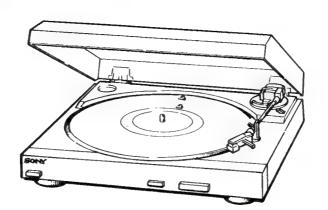
3X8 TYPE2 N-S

#2 7-685-134-19 SCREW +BTP 2.6X8 TYPE2 M-S
#3 7-682-661-09 SCREW +PSW 4X8
#4 7-685-136-19 SCREW +P 2.6X12 TYPE2 NON-SLIT
#5 7-685-647-79 SCREW, TAPPING
#6 7-682-548-04 SCREW +BYTT 3X8 (S)
#7 7-682-554-04 SCREW +B 3X25
#8 7-621-255-15 SCREW +P 2X3

7-685-646-79 SCREW +BVTP

PS-D707/D707P

SERVICE MANUAL



AEP Model E Model Tourist Model

> UK Model PS-D707P

PS-D707P is the STEREO TURNTABLE SYSTEM in LBT-D607CD/707CD

Photo: PS-D707

SPECIFICATIONS

Turntable

Platter Motor Drive system Speed

Wow and flutter Signal-to-noise ratio Automatic system

Type Pivot-to-stylus length Overall arm length

Cartridge Type

Frequency response Stylus

General

Dimensions

Weight Power requirements 30cm (12 in.) DC servo motor

Belt drive 33 1/3 rpm/45 rpm switchable

0.15% (WRMS) 65 dB (DIN-B)

Return, reject, lead in

Dynamically balanced 206 mm (7 % in.) 235 mm (9 % in.)

Moving magnet type 20 Hz-20kHz ND-155G

355 × 93.5 × 355 mm(w/h/d) (14 × 3 ¾ × 14 inches)

Approx. 2.6 kg (4 lb 14 oz) D707: AEP, Germany, Italian models

220 V AC, 50/60 Hz D707: Australia model 240 V AC, 50 Hz

D707: E, Saudi Arabia models 110-120 V, 220-240 V adjustable

50/60 Hz

Power consumption Accessory supplied Optional accessory

4 W 45-rpm adaptor (1)

Replacement stylus ND-155G

Note for Cartridge

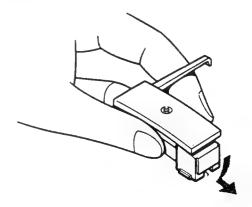
Be careful not to use any cartridge except for specified one (Part No.: 4-944-756-01) as balance weight of pick up arm assy is fixed.

REPLACING THE STYLUS

Replace the stylus after about 400 hours of use because using a worn stylus will damage records.

An ND-155G replacement stylus is available at your Sony dealer. Be sure to turn the amplifier off before proceeding with replacement.

- 1 While holding the cartridge, detach the stylus assembly as
- 2 Insert the new stylus into the cartridge.



Design and specificatins subject to change without notice.

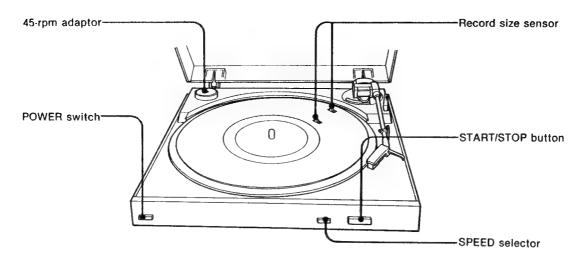
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

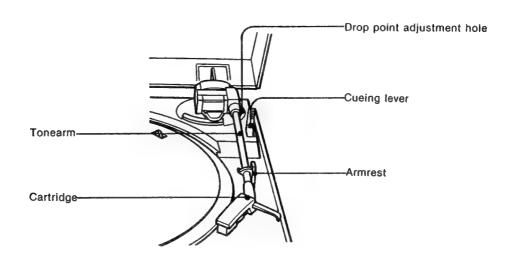


STEREO TURNTABLE SYSTEM SONY

SECTION 1 GENERAL

1-1. LOCATION OF CONTROLS

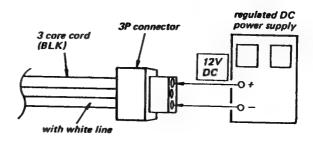




REPAIRING PRECAUTION (PS-D707P only)

[To supply B+ voltage]

The power of this unit is fed from LBT-D607CD or LBT-D707CD. Because of this, connect the regulated power supply as illustrated right when this unit alone operates.



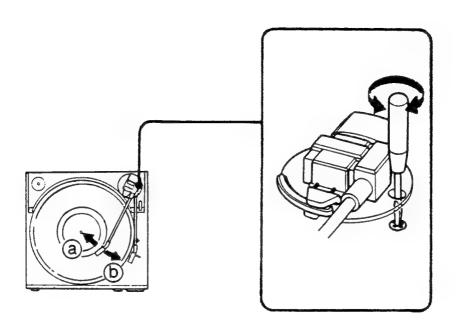
1-2. TONEARM DROP-POINT ADJUSTMENT

The tonearm drop-point during auto play has been factoryadjusted. If necessary, readjust it as follows.

To readjust the drop-point inward (a), turn the screw clockwise with a screwdriver.

To readjust the drop-point outward (b), turn the screw counterclockwise.

If the tonearm does not return to the arm rest automatically after play
Turn the adjustment screw counterclockwise.



1-3. Speed Adjustment

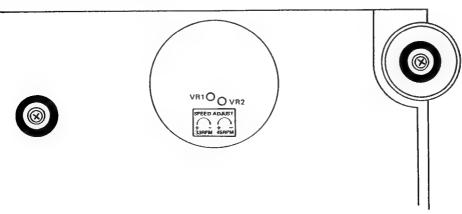
Note: Be sure to perform 45rpm adjustment before 33 rpm.

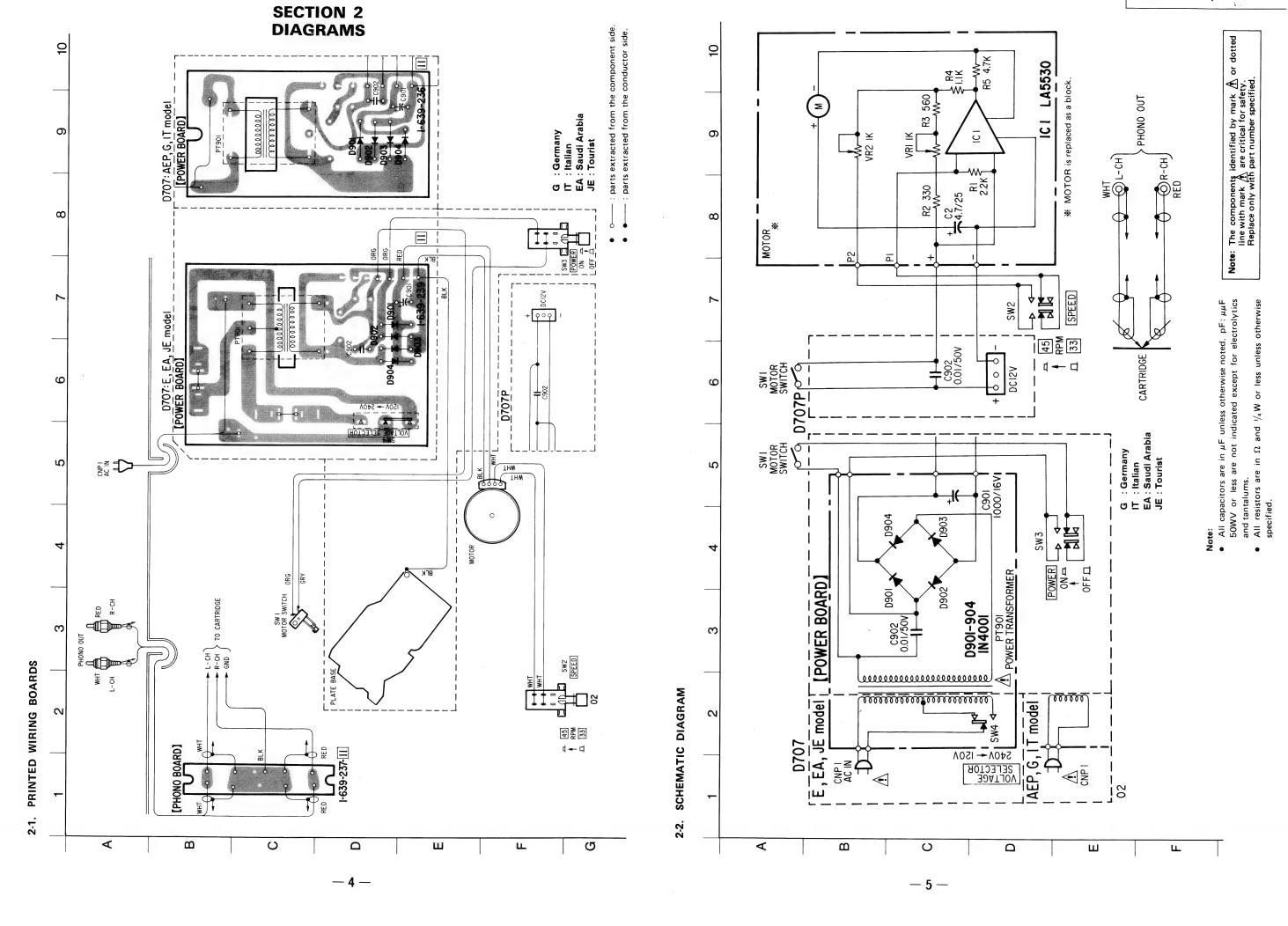
- 1. Place a stroboscope board on the turntable sheet.
- 2. Set the SPEED switch to 45.

Press the START button.

Adjust VR2 so that the striped pattern of stroboscope board is stationary.

3. Set the SPEED switch to 33. Adjust VR1 in the same way.





- •-XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts

KNOB, BALANCE (WHITE) (RED)

● Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

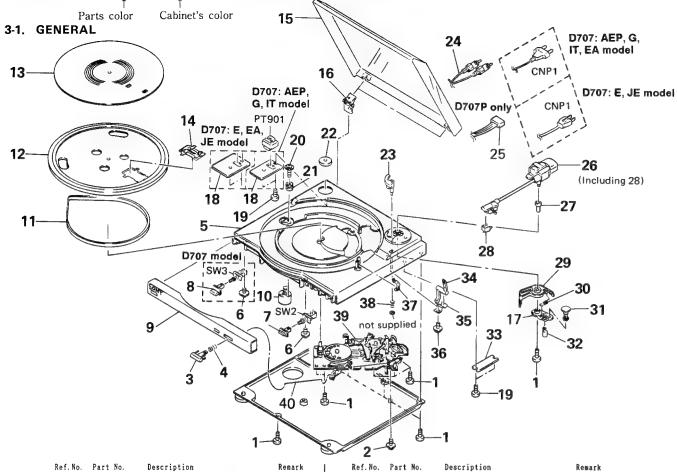
• The mechanical parts with no reference number in the exploded views are not supplied.

When indicating parts by reference number, please include the board.

The components identified by mark or dotted line with mark are critical for safety.

Replace only with part number specified

G : Germany EA : Saudi Arabia IT: Italian JE : Tourist



Remark

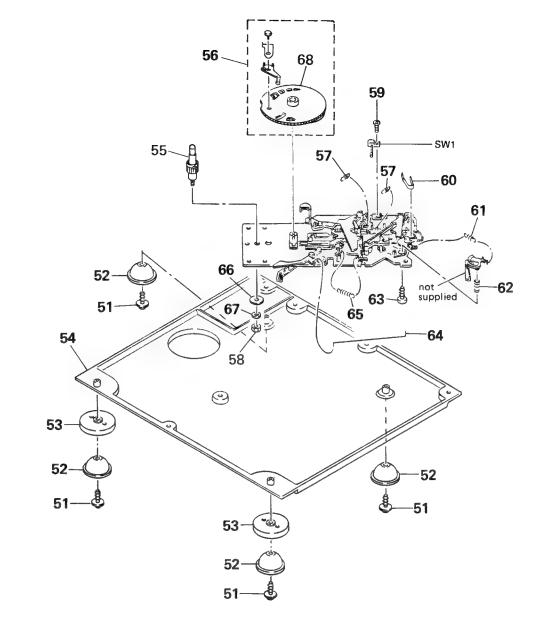
	2	4-946-234-01 4-944-680-01	SCREW #2WPT 3X12Y SCREW #2WPT 3X10X12Y BUTTON, START STOP(BLACK) (D707:EA3, JE, IT) BUTTON, START STOP(GRAY) (D707:AEP, G, EA3, JE, E/D707P)
			(5101.161, 6, 510, 55, 5, 51011)
	4	4-944-686-01	SPRING, RETURN
*	5	4-944-678-01	CABINET, UPPER
	6	8-099-230-08	SCREW 3X8
		4-944-683-01	BUTTON, SPEED (BLACK) (D707:EA3, JE, IT, E)
	7	4-944-683-11	BUTTON, SPEED (GRAY)
			(D707: AEP, G. EA3. JE/D707P)
	8	4-944-681-01	BUTTON, POWER(BLACK) (D707:EA3, JE, IT)
			BUTTON, POWER (GRAY) (D707: AEP, G, EA3, JE, E)
			PANEL (G) ASSY, FRONT (GRAY)
			(D707: AEP, G, EA3, JE, E)
	8	A-4660-103-A	PANEL (P-G) ASSY, FRONT(D707P)
	9	A-4660-104-A	PANEL (B) ASSY, FRONT(BLACK)
			(D707:EA3, JE, IT)
	10	1-541-872-11	NOTOR, DC (WITH PULLEY)
	11	4-944-743-01	BELT
	12	4-944-744-01	PLATER
	13	4-950-309-01	SHEET, RUBBER
		A-4325-130-A	· · · · · · · · · · · · · · · · · · ·
			COVER ASSY, DUST
		4-944-691-01	
			ARN (A), FEED

1-639-239-11 POWER BOARD(D707:EA3, JE, E) 1-639-236-11 POWER BOARD (D707: AEP, G, IT)

Description

	4-944-729-01		
		SCREW, SETTING MOTOR	
		CUSHION, MOTOR	
	3-701-806-00		
23	4-944-675-01	ARM, ELEVATION	
24	1-551-294-00	CORD (PHONO)	
25	1-590-871-11	CORD (WITH CONNECTOR) 3P(D707P)
		ARN ASSY, TONE	
* 27	4-944-672-01	BUSHING, TONE ARM	
28	4-944-756-01	CARTRIDGE	
29	4-944-704-01	ARN (B), FEED	
30	4-944-705-01	SPRING, FEED ARM	
31	4-944-759-01	ADJUSTMENT, CAM LEAD IN	
32	4-944-760-01	ADJUSTMENT, CAM LEAD AUTORETURN	
* 33	1-639-237-11	PC BOARD, PHONO	
34	4-944-674-01	LEVER, CUING	
* 35	4-944-685-01	BRACKET, CUING	
36	4-944-695-01	SCREW	
37	4-944-673-01	LOCKER, ARM	
38	4-944-687-01	SPRING, ELEVATION	
* 39	A-4604-842-A	NECHANICAL ASSY, BASE	
40	4-944-688-01	LINK, START CUT	
A CNP1	1-555-750-00	CORD, POWER (D707: AEP, G, EA3, IT)	
∆ CNP1	1-551-188-XX	CORD, POWER (D707: JE, E)	
▲ PT901	1-450-508-11	TRANSFORMER, POWER (D707)	
SW2	1-572-744-11	SWITCH, PUSH (SPEED)	
SW3	1-572-744-11	SWITCH, PUSH (POWER) (D707)	

3-2. MD SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description
51	4-946-234-01	SCREW #2WPT 3X10X12Y		61	4-944-723-01	SPRING, CONTROL
52	4-944-693-01	RUBBER, FOOT		62	4-944-722-01	SPRING, CUING CAM
53	4-944-679-01	COVER, FOOT		63	4-946-233-01	SCREW #2WPT 3X12Y
* 54	4-944-684-01	COVER, BOTTOM		64	4-944-727-01	LINK, REJECT
55	A-4604-892-A	SHAFT ASSY, CENTER		65	4-944-724-01	SPRING, MECHANICAL
56	A-4325-128-A	GEAR ASSY, RING		66	4-944-731-01	WASHER, RAIN
* 57	4-944-725-01	SPRING, SWITCH		67	4-944-732-01	WASHER, SPRING
58	4-944-730-01	NUT		68	4-944-738-01	GEAR, RING
59	4-944-728-01	SCREW		SW1	1-572-746-11	SWITCH, LEAF
* 60	4-944-726-01	BRACKET, LOCKER				

POWER

NOTE:

• Due to stan the parts lis parts specia components

● -XX, -X n they may the original • RESISTOR

All resistor METAL: M METAL OX F: nonflamn

C902 1

Ref. No. Pa

⚠ CNP1 1 ∆CNP1 1

> D901 8 D902 8 D903 8 D904 8

⚠ PT901 1

Remark _____

3-2. MD SECTION

model

supplied 65 (3) 53-51-

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description
51	4-946-234-01	SCREW #2WPT 3X10X12Y		61	4-944-723-01	SPRING, CONTROL
52	4-944-693-01	RUBBER, FOOT		62	4-944-722-01	SPRING, CUING CAM
53	4-944-679-01	COVER, FOOT		63	4-946-233-01	SCREW #2WPT 3X12Y
* 54	4-944-684-01	COVER, BOTTOM		64	4-944-727-01	LINK, REJECT
55	A-4604-892-A	SHAFT ASSY, CENTER		65	4-944-724-01	SPRING, MECHANICAL
56	A-4325-128-A	GEAR ASSY, RING		66	4-944-731-01	WASHER, RAIN
* 57	4-944-725-01	SPRING, SWITCH		67	4-944-732-01	WASHER, SPRING
58	4-944-730-01	NUT		68	4-944-738-01	GEAR, RING
59	4-944-728-01	SCREW		SW1	1-572-746-11	SWITCH, LEAF
* 60	4-944-726-01	BRACKET, LOCKER				

-7-

PS-D707/D707P

POWER

SECTION 4 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS All resistors are in ohms METAL: Metal-film resistor METAL OXIDE: Metal oxide-film resistor F: nonflammable

• Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• SEMICONDUCTORS

In each case, u:μ, for example: uA....:μA...., uPA....:μPA.... uPB....:μPC.... uPD....:μPC.... uPD....:μPD.... G : Germany

CAPACITORS uF:μF

IT : Italian EA : Saudi Arabia • COILS uH: µH JE : Tourist

The components identified by mark or dotted line with mark hare critical for safety.

Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	1-639-236-11	POWER BOARD (D707: AEP, G, IT)					
*		POWER BOARD (D707: EA3. JE. E)				MISCELLANEOUS	
		*****				******	
		< CAPACITOR >		10	1-541-872-11	MOTOR, DC (WITH PULLEY)	
				24	1-551-294-00	CORD (PHONO)	
C901	1-124-360-00	ELECT 1000uF 20% 16V	(D707)	25	1-590-871-11	CORD (WITH CONNECTOR) 3P(D707P)	
C902	1-136-153-00	FILM 0.01uF 50V		* 33	1-639-237-11	PC BOARD, PHONO	
				▲ CNP1	1-555-750-00	CORD, POWER (D707: AEP, G, EA3, IT)	
		< CONNECTOR >	}				
				A CNP1	1-551-188-XX	CORD, POWER (D707: JE, E)	
⚠ CNP1	1-555-750-00	CORD, POWER (D707: AEP, G, EA3, IT)		SW1	1-572-746-11	SWITCH, LEAF	
A CNP1	1-551-188-XX	CORD, POWER (D707: JE, E)		SW2	1-572-744-11	SWITCH, PUSH (SPEED)	
				SW3	1-572-744-11	SWITCH, PUSH (POWER) (D707)	
		< DIODE >					
				******	********	**********	******
D901	8-719-200-02	DIODE 10E2(D707)	ł				
D902	8-719-200-02	DIODE 10E2(D707)	1		ACCESSORIE	S & PACKING MATERIALS	
D903	8-719-200-02	DIODE 10E2(D707)			*******	********	
D904	8-719-200-02	DIODE 10E2(D707)					
					3-754-642-11	MANUAL, INSTRUCTION (D707: AEP, E.	
		< TRANSFORMER >				(ENGLISH, FRENCH, SPANISH, PORTUG	
					3-754-642-41	MANUAL, INSTRUCTION (D707: AEP, G	IT)
▲ PT901	1-450-508-11	TRANSFORMER, POWER(D707)				(GERMAN, DUTCH, SWEDISH, ITALIAN)	
				*	4-944-749-01	CUSHION (FRONT)	
		< SWITCH >					
				*		CUSHION (REAR)	
SW4	1-572-745-11	SELECTOR, VOLTAGE (D707: EA3, JE,	E)	*		INDIVIDUAL CARTON (D707: AEP, G, E.	
				*		INDIVIDUAL CARTON (D707: EA3, JE,	IT)
				*	4-950-064-01	INDIVIDUAL CARTON(D707P)	

Sony Corporation Audio Group

Printed in Japan

9-956-982-11

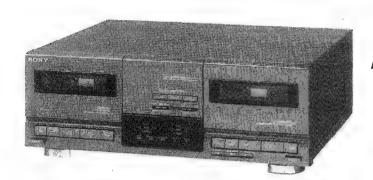
Remark _____

-8-

Published by Customer Relations and Service Group

TC-D507

SERVICE MANUAL



AEP Model UK Model E Model Australian Model East European Model

This set is the deck section in LBT-D507/D507CD/D507CDM.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol [7] are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	TC-H1600
Tape Transport	DECK A: TCM-190RA12C
Mechanism Type	DECK B: TCM-190RB22C

SPECIFICATIONS

Recording system

Frequency response

4-track 2-channel stereo

DOLBY NR OFF With Type IV cassette (Sony METAL-ES)

30 Hz to 15 kHz (±3 dB) With Type II cassette (Sony UX-S) 40 Hz to 14 kHz (±3 dB) With Type I cassette (Sony HF-S) 40 Hz to 14 kHz (± 3 dB)

Wow and flutter Weight

±0.2 % (DIN) Approx. 3.4 kg

Dimensions

Approx. $355 \times 131 \times 304 \text{ mm}$ (w/h/d, including projections)

Design and specifications are subject to change without notice.

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.





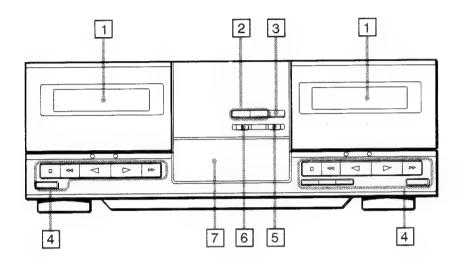
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SECTION 1 GENERAL

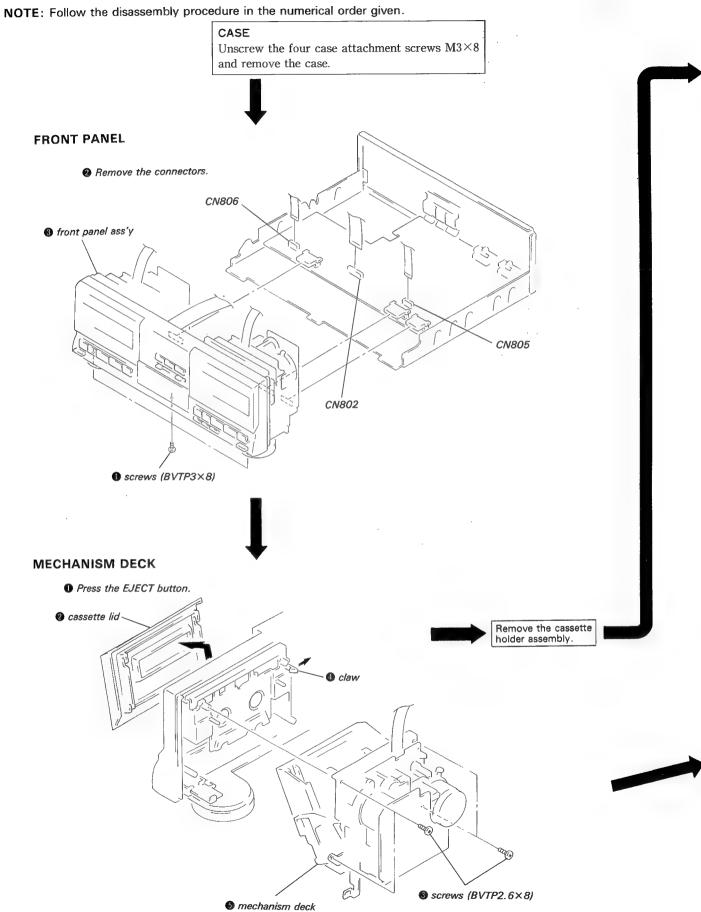
Location of Controls

This section is extracted from instruction manual.

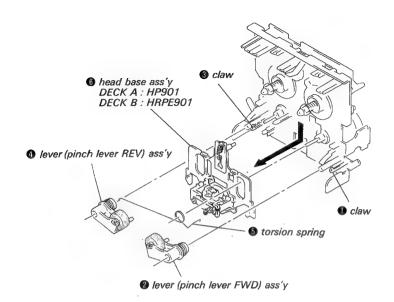


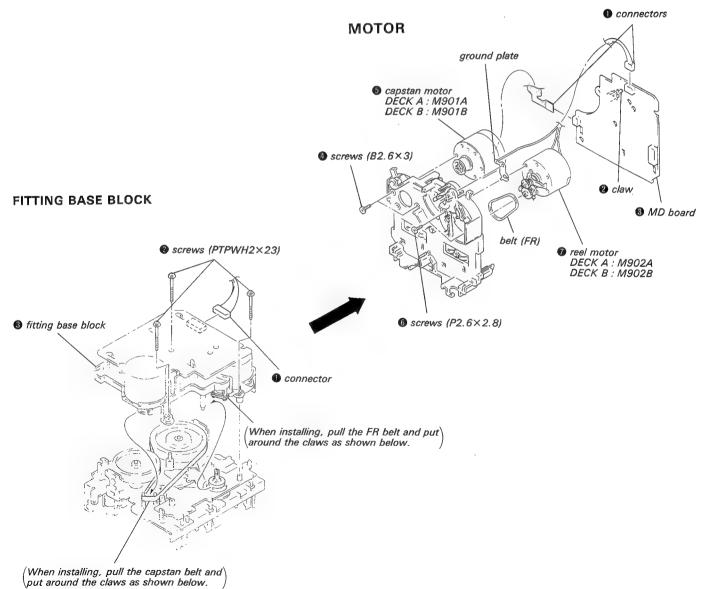
- 1 Cassette hoiders
- 2 SYNCHRO DUBBING buttons (44)
- 3 CD SYNCHRO button (48)
- 4 Tape operation buttons
 - ← Leftward fast winding/AMS*,
 - ►► Rightward fast winding/AMS*,
 - ► Forward play, ◀ Reverse play,
 - Stop, ▲ Eject, Pause (deck B only),
 - O Record muting (deck B only),
 - Record (deck B only)
- 5 DOLBY NR (noise reduction) switch (36)
- 6 DIRECTION MODE selector (32, 36, 44, 48)
- 7 Display window
- * AMS is the abbreviation of Automatic Music Sensor.

SECTION 2 DISASSEMBLY



HEAD





SECTION 3 MECHANICAL ADJUSTMENTS

SECTION 4 ELECTRICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcoholmoistened swab;

record/playback/erase head

pinch roller

rubber belts

capstan

idler

2. Demagnetize the record/playback head with a head demagnetizer.

(Head demagnetizer do not approach for the erase head.)

- 3. Do not use a magnetized screwdriver for the adjustments.
- 4. After the adjustments, apply suitable locking compound to the parts adjusted.
- 5. The adjustments should be performed in the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	35 to 60g · cm (0.49 to 0.83 oz · inch)
FWD Back tension	CQ-102C	2 to 6g·cm (0.03 to 0.08 oz·inch)
REV	CQ-102RC	35 to 60g · cm (0.49 to 0.83 oz · inch)
REV Back tension	CQ-102RC	2 to 6g*cm (0.03 to 0.08 oz*inch)
FF, REW	CQ-201B	70 to 110g · cm (0.98 to 1.52 oz · inch)

Note: The adjustment should be performed in the order given in the service manual. As a rule, adjustment about playback should be performed before adjustment about recording.

The adjustments should be performed for both L-CH and R-CH.

• Test Mode

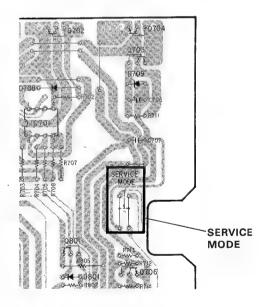
The Test mode is acrivated by shorting Test Poing Service mode (IC801 64 pin changes over to "L") with the POWER switch in OFF position, then turning on the POWER switch.

In this mode, the following functions operate:

- 1. Source monitor

 Line mute is cancelled during recording.
- High speed playback
 High speed playback is executed when the HIGH SPEED
 (DUBBING) button is jpressed during playback. Normal
 speed playback is restored when the button is pressed
 again.
- Record memory
 The tape counter is reset to "0" at the record start point.
 After adjustment, open the Service mode to cancel the Test mode.

[MAIN BOARD] (CONDUCTOR SIDE)

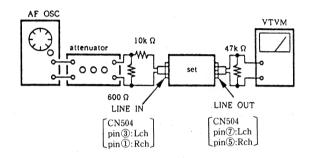


• Switches and controls should be set as follows unless otherwise specified.

• Standard Record:

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

- Record Mode -



Standard Input Level

input terminal	LINE IN		
source impedance	10kΩ		
input level	0.25V (-10dB)		

Standard Output Level

output terminal	LINE OUT
load impedance	47kΩ
output level	0.44V (-5dB)

Test tape

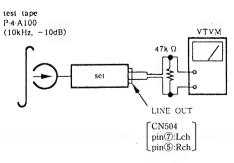
Type	Signal	Used for
P-4-A100	10kHz, -10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

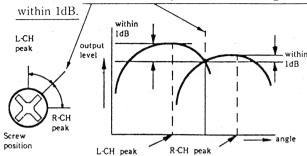
DECK A DECK B

Procedure:

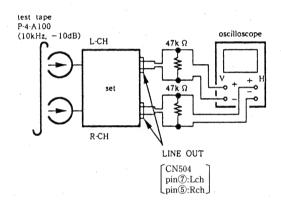
1. Mode: FWD playback

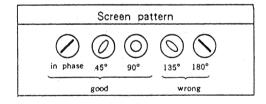


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together



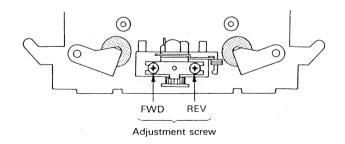
3. Phase Check Mode: playback





- 4. Set in the REV mode and repeat the step 1-3.
- 5. After the adjustment, lock the screws with locking compound.

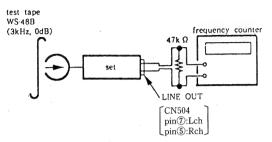
Adjustment Location: Record/playback head



Tape Speed Adjustment DECK A DECK B

Procedure:

Mode: playback



Perform high speed adjustment before normal speed adjustment.

(High speed adjustment)

- 1. Continue pressing the SYNCHRO DUBBING HIGH SPEED switch.
- 2. Check that frequency counter reading is within the standard value $6{,}000\pm60$ Hz.
- 3. If out of the standard, adjust each RV72 so that the frequency counter reading satisfies $6,000\pm60$ Hz on both A and B decks.
- 4. Change over to Rev playback status, and repeat the above steps 1 to 3.

(Normal speed adjustment)

- Continue pressing the SYNCHRO DUBBING NORM SPEED switch.
- 2. Check that the frequency counter reading is within the standard value $3,000\pm30 Hz$.
- 3. If out of the standard, adjust each RV71 so that the frequency counter reading satisfies $3,000\pm30$ Hz on both A and B decks.
- 4. Change over to REV playback status, and repeat the above steps 1 to 3.

Frequency difference between the beginning and the end of the tape should be within 3%.

Frequency difference between deck A and deck B the beginning of the tape should be within 1.0%.

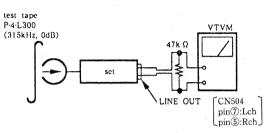
Adjustment Location:

MD-A, MD-B board

Playback Level Adjustment DECK A DECK B

Procedure:

Mode: playback



Adjust RV11 (L-CH), RV21 (R-CH) so that the reading on VTVM meets the adjustment limits below.

Adjustment Limits:

LINE OUT level: $-7.7 \pm 0.5 dB (0.30 - 0.33 V)$

Level difference between channels: less than 0.5dB Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location: MD-A, MD-B board

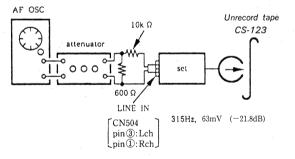
Record Bias Adjustment DECK B

Setting :

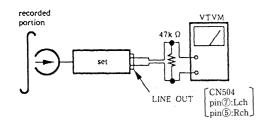
REC LEVEL control: Standard Record (See page 7).

Procedure :

1. Mode: record



2. Mode: playback



Playback the signal recorded in step 1.

Confirm that the 10kHz playback output is $0\pm0.5dB$ relative to the 315Hz output. If necessary, adjust RV12 (L-CH), RV22 (R-CH) and repeat the steps given above.

Adjustment Location : MD-B board

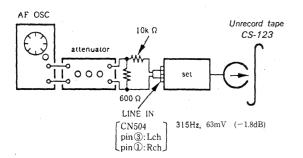
Record Level Adjustment DECK B

Settina:

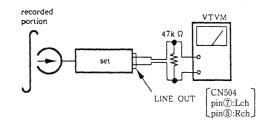
REC LEVEL control: Standard Record (See page 7).

Procedure:

1. Mode: record



2. Mode: playback



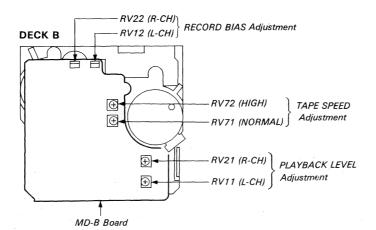
3. Playback the signal recorded in step 1.

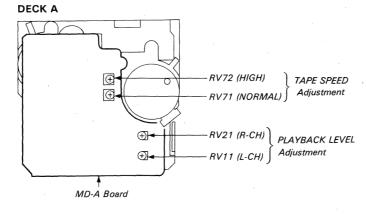
Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat the step 1-2.

Adjustment Limits: $-3.8dB \pm 0.5dB$ (0.47-0.53V)

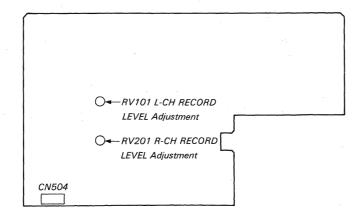
Adjustment Location: MAIN board (component side)

- Adjustment Parts Location Diagrams -



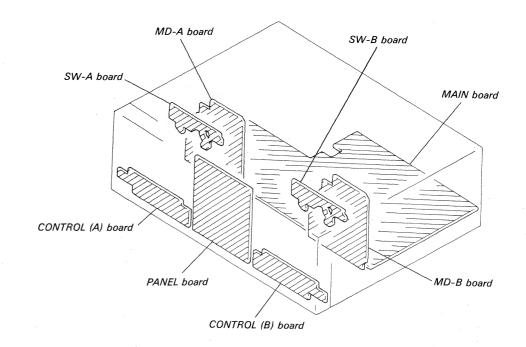


MAIN BOARD (COMPONENT SIDE)

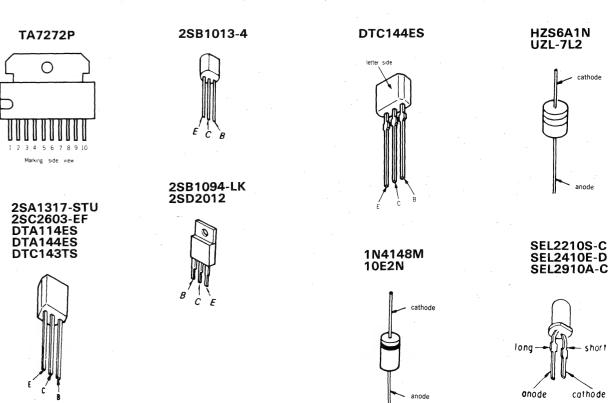


SECTION 5 DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



5-2. SEMICONDUCTOR LEAD LAYOUTS



5-3. PRINTED WIRING BOARDS

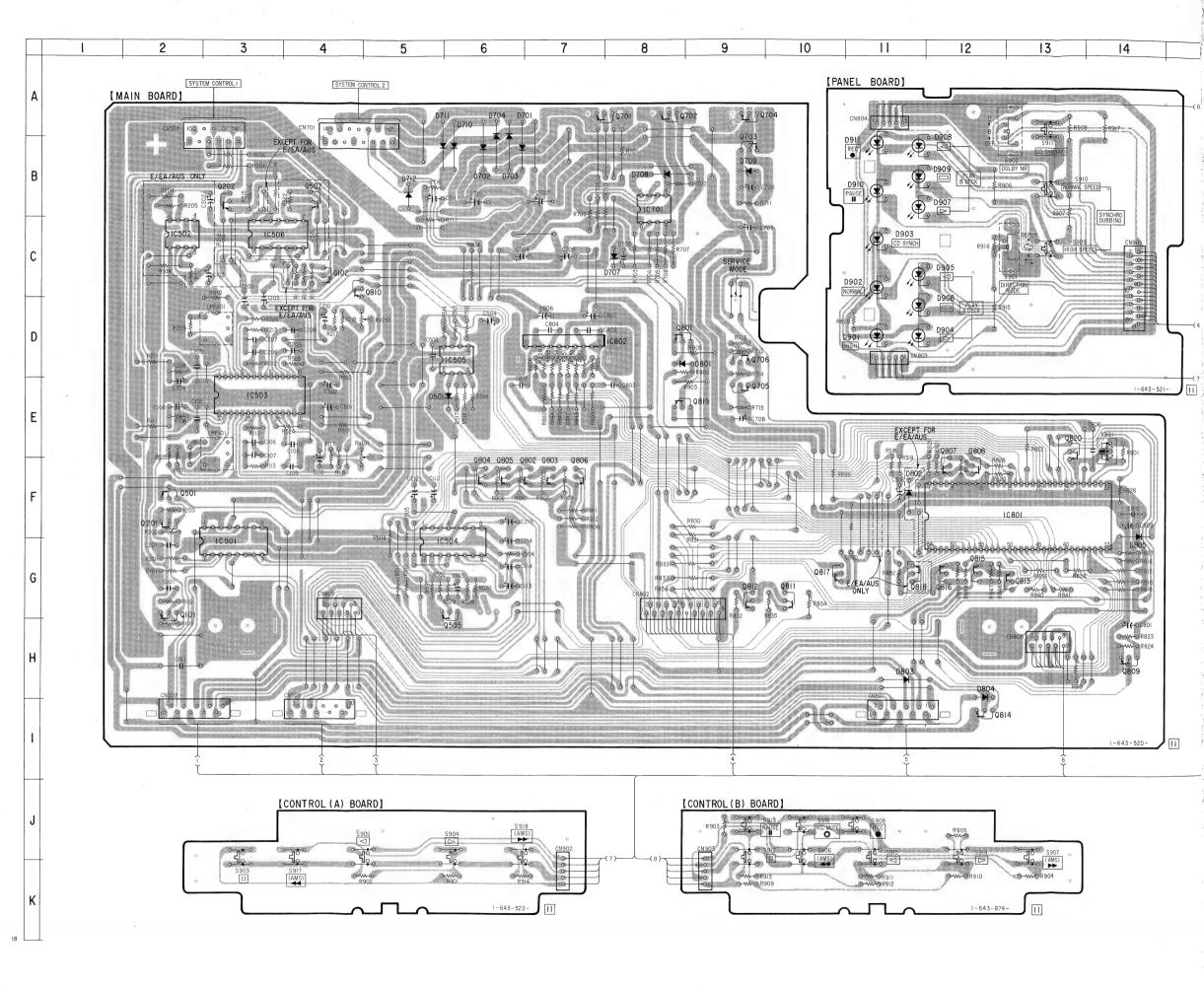
Semiconductor Location

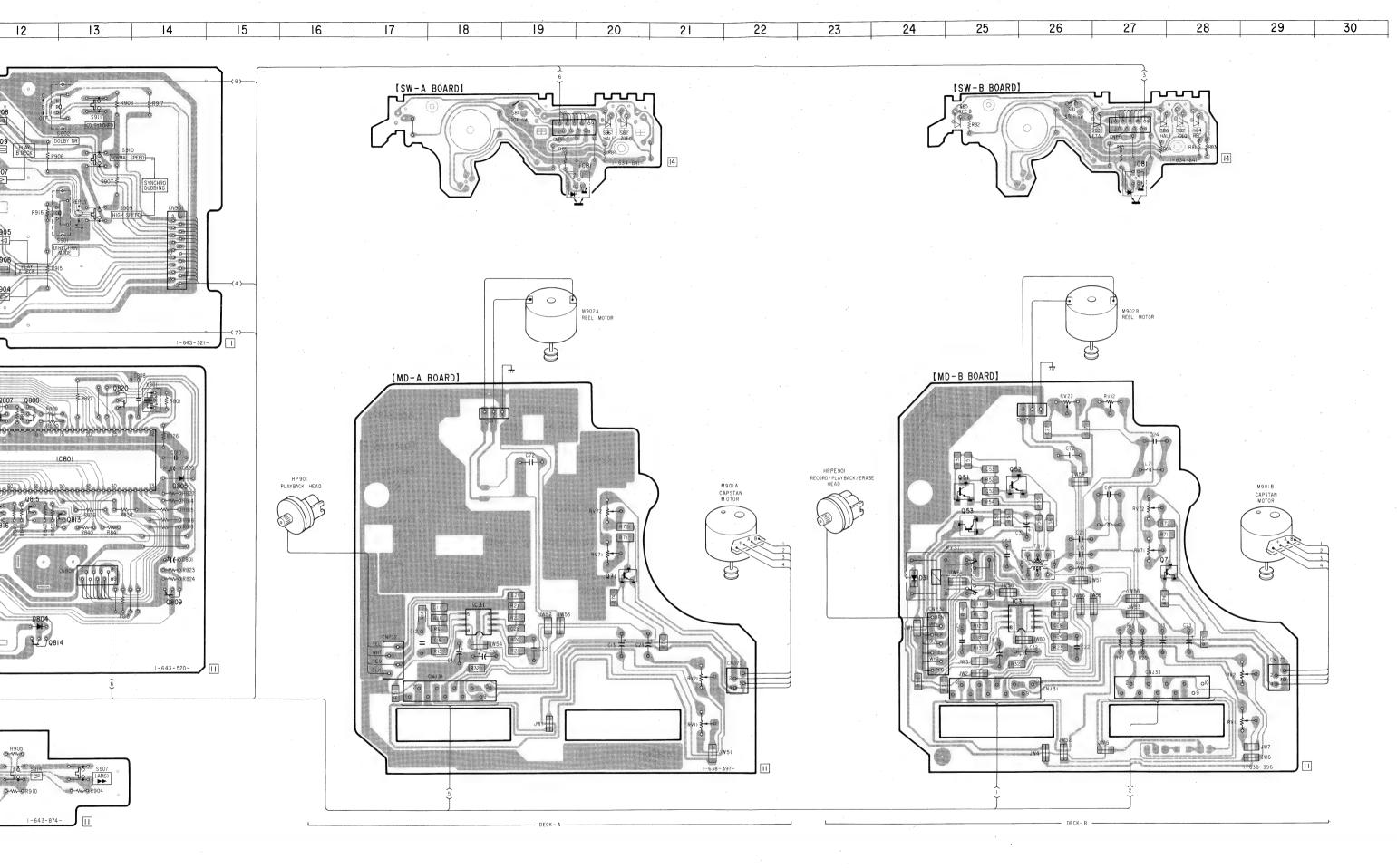
Note:

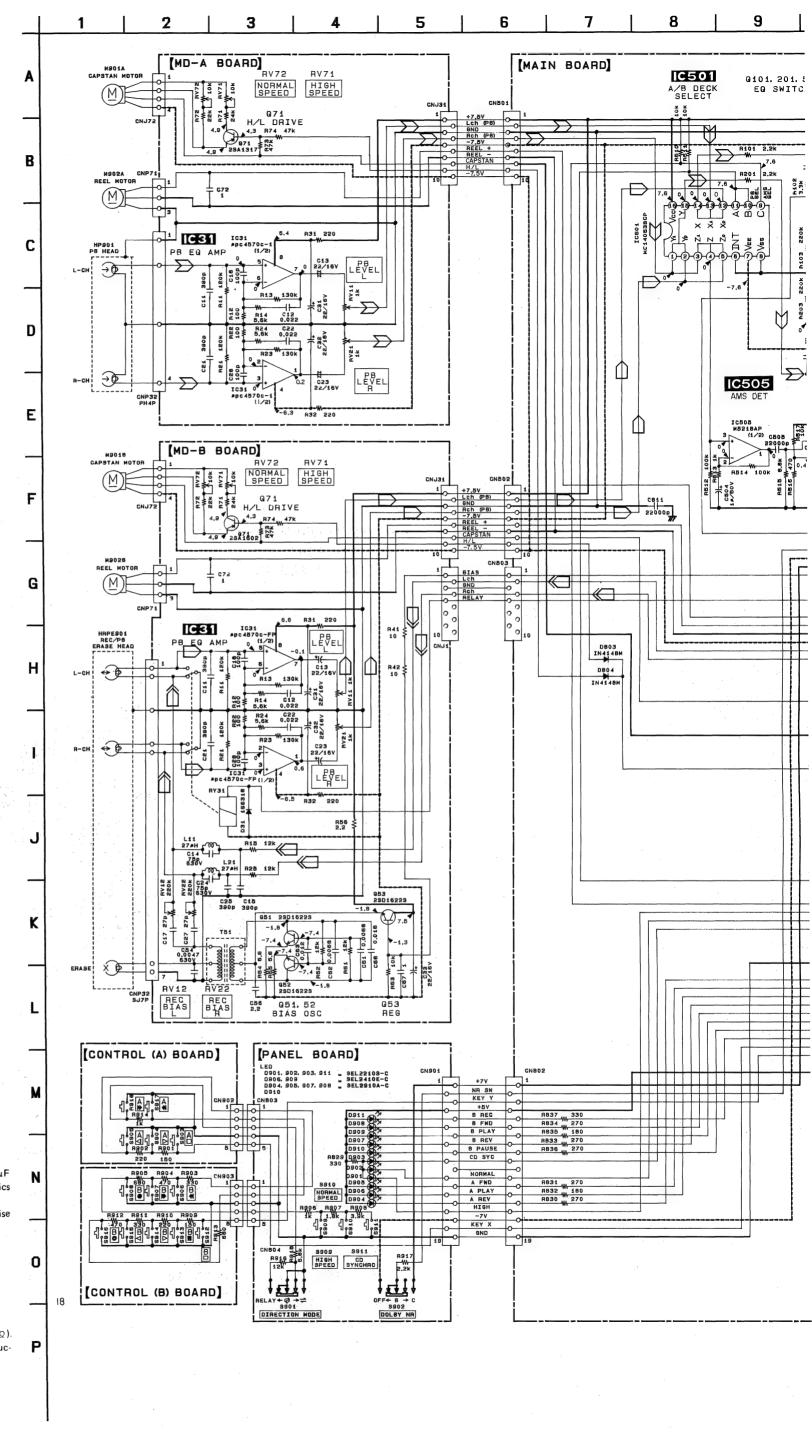
• o---: parts extracted from the component side.

EA:Saudi Arab

AUS: Australian



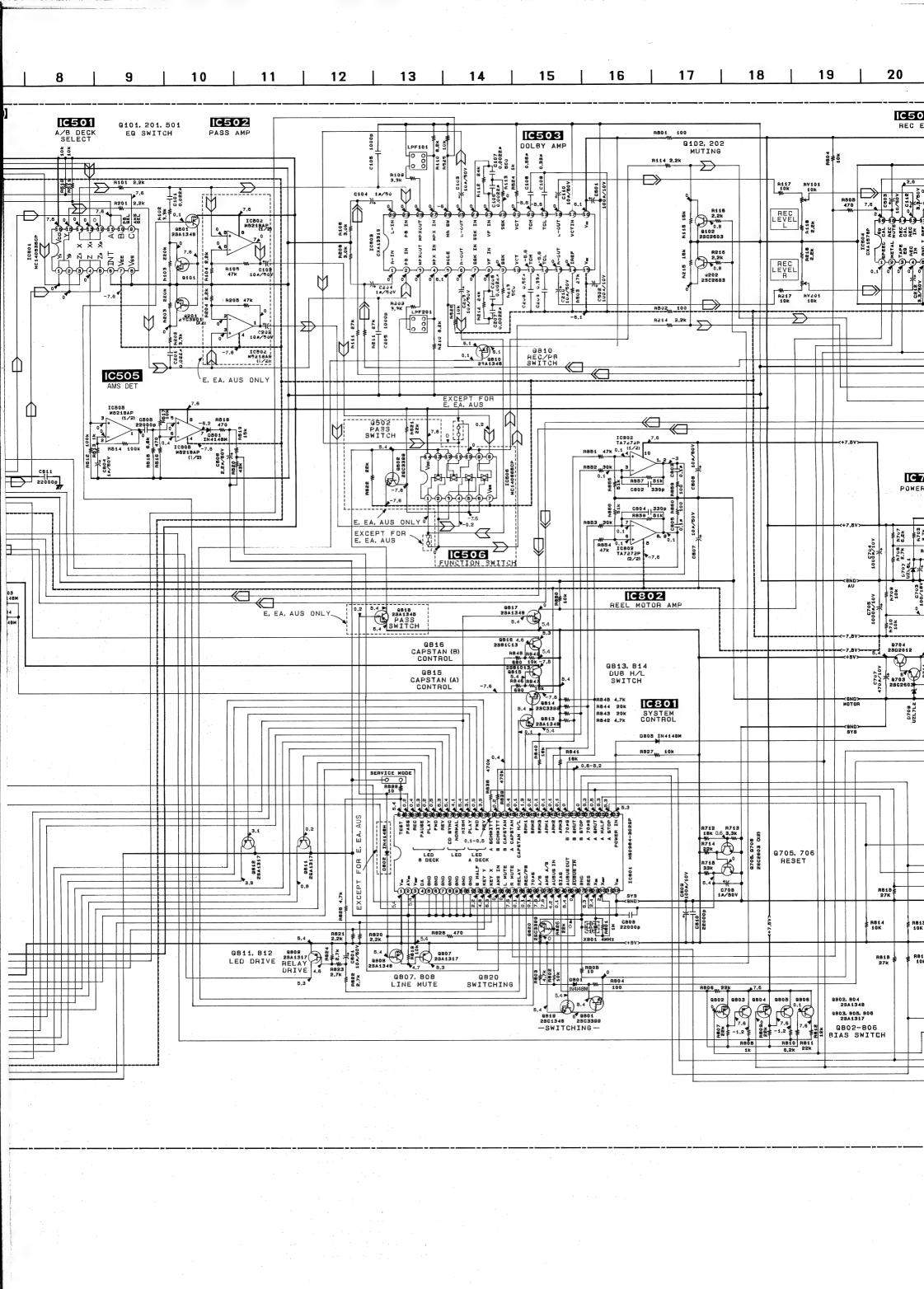


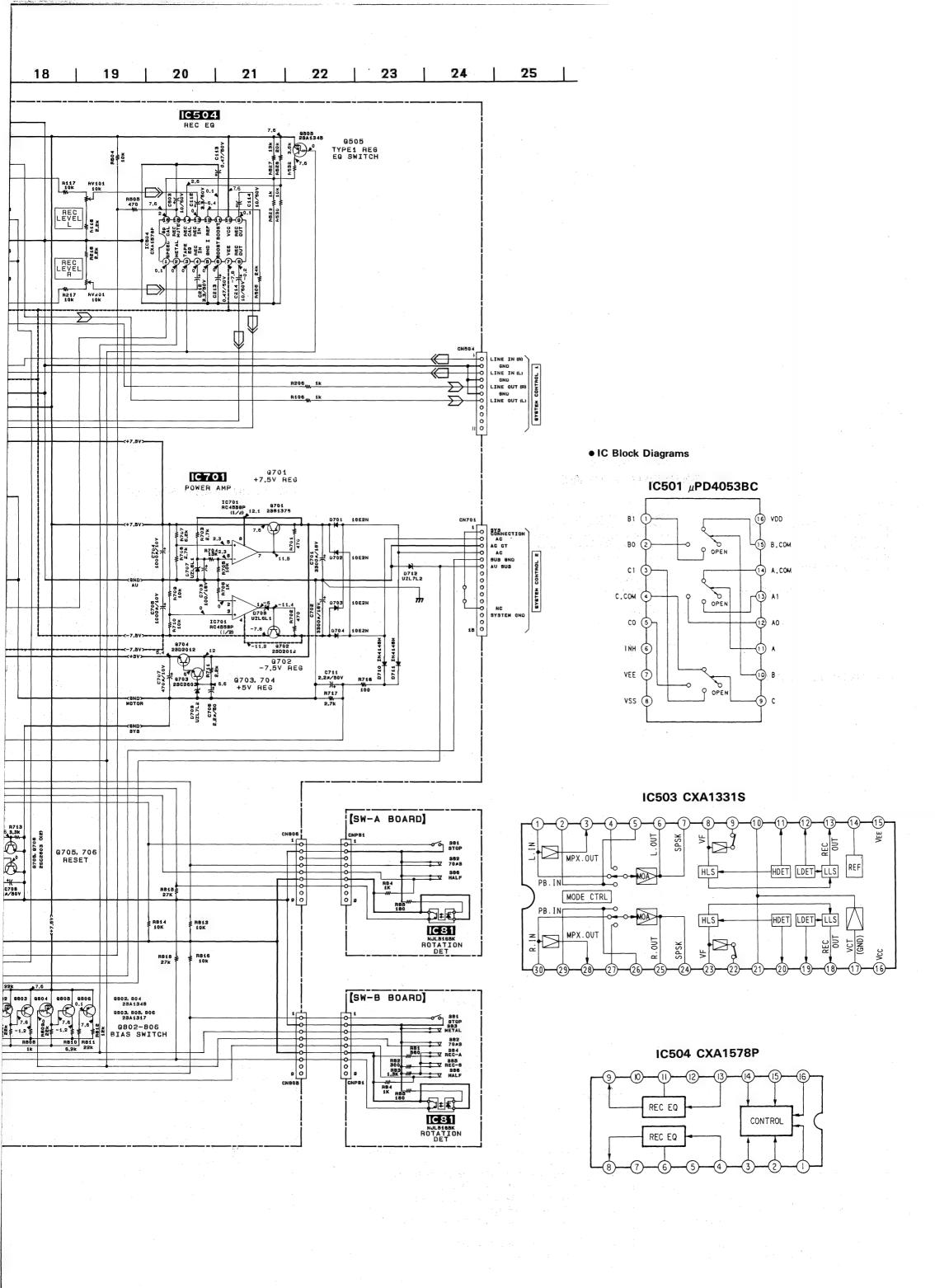


Note:

- All capacitors are in μF unless otherwise noted. pF: $\mu \mu F$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise
- specified. △ : internal component.
- : B+ Line
- ---: B- Line
- ____: adjustment for repair.
- Voltage is dc with respect to ground under no-signal (detuned) conditions. no mark: REC
- Voltages are taken with a VOM (Input Impedance $10M\,\Omega$). Voltage variations may be noted due to normal production tolerances.
- Signal path.
 - ∑ : PB (DECK A)
 - □ : PB (DECK B)

: REC (DECK B) EA:Saudi Arabia





SECTION 6 EXPLODED VIEWS

NOTE:

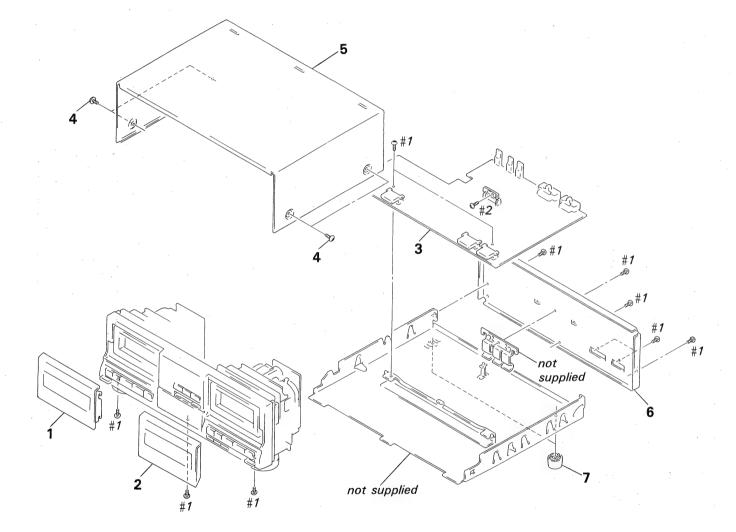
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts Example:

KNOB, BALANCE(WHITE)...(RED)

Parts color Cabinet's color

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- hardware (#mark) list is given in the last of this parts list.
- G : Germany
- IT : Italian
- EE : East European
- EA: Saudi Arabia
- AUS : Australian

6-1. OVERALL SECTION



Ref. No.	Part No.	Description Remark	Ref. No.	Part No.	Description Remark
1	X-3364-710-1	LID (A) ASSY, CASSETTE (AEP, G, EE, UK, E, EA, AUS)	* 3		MAIN BOARD, COMPLETE (E, EA, AUS) SCREW (CASE +3X8 TP2)
-1 2		LID (A) ASSY, CASSETTE (IT) LID (B) ASSY, CASSETTE	* 5 * 5		CASE (AEP, G, EE, UK, E, EA, AUS)
-	7 0004 112 1	(AEP, G, EE, UK, E, EA, AUS)	* 6		PANEL, BACK (AEP, IT, EE, UK, E, EA, AUS)
2	X-3364-713-1	LID (B) ASSY, CASSETTE (IT)	* 6	3-377-136-21	PANEL, BACK (G)
* 3	A-2006-741-A	MAIN BOARD, COMPLETE (AEP, G, IT, EE, UK)	7	4-931-169-01	FOOT

6-2. FRONT PANEL SECTION

Ref. No. Part No.

52 * 53

59

Description

X-3364-707-1 PANEL ASSY, FRONT (IT)

3-662-752-21 SPRING, TENSION

1-643-521-11 PANEL BOARD

3-308-823-11 SPRING

1-643-523-11 CONTROL (A) BOARD

1-643-874-11 CONTROL (B) BOARD

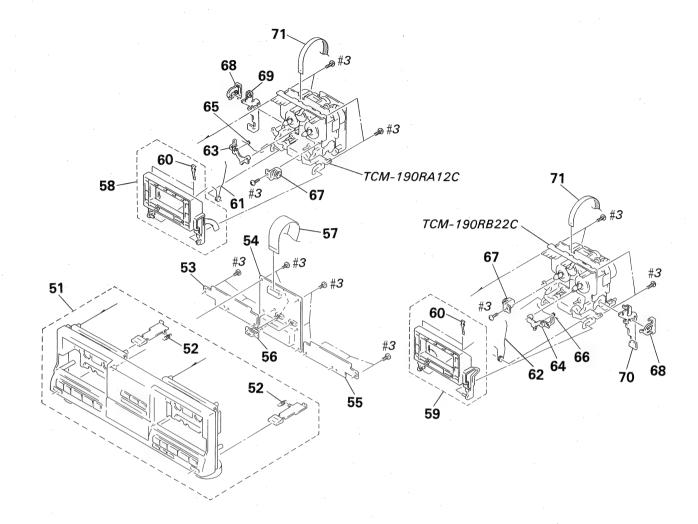
3-377-110-11 KNOB (SLIDE) (IT)

1-590-237-11 WIRE, FLAT TYPE (19 CORE) X-3340-194-1 HOLDER (L) ASSY, CASSETTE

X-3340-195-1 HOLDER (R) ASSY, CASSETTE

X-3364-706-1 PANEL ASSY, FRONT (AEP, G, EE, UK, E, EA, AUS)

3-377-110-01 KNOB (SLIDE) (AEP, G, EE, UK, E, EA, AUS)



R	ef. No.	Part No.	Description	Remark
-				
	61	3-354-959-01	SPRING (LOADING L), TORSION	
	62		SPRING (LOADING R), TORSION	
	63		LEVER (EJ SAFTY LEVER L)	
	64		LEVER (EJ SAFTY LEVER R)	
	65		SPRING (EJ SAFTY SPRING L)	
	66	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
	67	3-354-963-01		
	68	3-354-957-01	JOINT (LOCK LEVER)	
*	69		LEVER (LOCK LEVER L)	
*	70		I EVER (LOCK LEVER P)	

1-690-906-11 WIRE (FLAT TYPE) (9 CORE)

_

101

6-3. MECHANISM

/TCM-190RA1

TCM-190RB2

	103	X-3359-408-1	LE ³
	104	3-356-713-01	WA
	105	X-3359-409-1	LE
			4
	106	X-3359-404-1	TA
	107	3-359-424-01	GE
	108	X-3359-406-1	FL
	108	X-3364-554-1	FL
	109	X-3359-410-1	FL
	110	3-359-417-01	BE.
	111	3-359-450-01	PL.
*	112	3-359-436-01	BA
	113	3-359-466-01	ΒE
	114	3-575-321-00	RE
	115	3-359-430-01	SP

Ref. No. Part No.

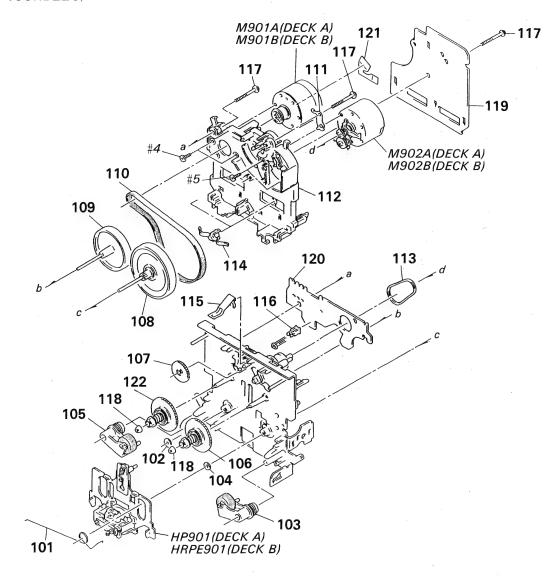
101 3-359-455-01 SP

102 3-356-714-01 WA

Remark

6-3. MECHANISM SECTION 1

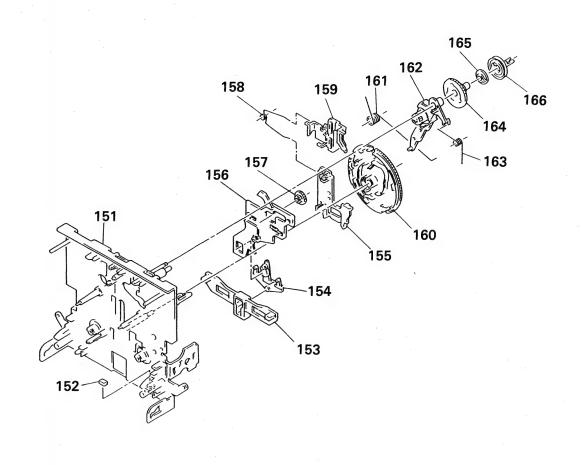
(TCM-190RA12C) TCM-190RB22C)



Remark	Ref. No.	Part No.	Description	Remark R	ef. No.	Part No.	Description	Remark
 RSION	101	3-359-455-01	SPRING, TORSION		116	3-343-419-01	HOLDER (S SENSER A)	
RSION	102	3-356-714-01	WASHER		117	3-359-414-01	SCREW (+PTPWH 2X23)	
L)	103	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY	<i>(</i>	118	3-362-308-01	CAP (REEL)	
R)	104	3-356-713-01	WASHER	*	119	A-2006-399-A	MD-A BORAD, COMPLETE (DECK A)	
G L)	105	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY	*	119	A-2006-400-A	MD-B BOARD, COMPLETE (DECK B)	
3 R)	106	X-3359-404-1	TABLE ASSY, REEL	*	120	1-634-841-14	SW-A BOARD (DECK A)	
	107	3-359-424-01	GEAR (REV GEAR)	*	120	1-634-841-14	SW-B BOARD (DECK B)	
	108	X-3359-406-1	FLYWHEEL (FWD) COMPLETE ASSY	(DECK A)	121	1-638-983-11	MOTOR FLEXIBLE BOARD	
	108	X-3364-554-1	FLYWHEEL (FWD) ASSY (DECK B)		122	X-3362-078-1	TABLE ASSY (B), REEL	
	109	X-3359-410-1	FLYWHEEL (REV) ASSY		HP901	A-2003-837-A	BASE ASSY, HEAD (PB) (DECK A)	
RE)	110	3-359-417-01	BELT (FLAT), CAPSTAN		HRPE90	1A-2003-838-A	BASE ASSY, HEAD (REC/PB/ERASE)	(DECK I
·	111	3-359-450-01	PLATE, GROUND		M901A	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK A)	
	* 112	3-359-436-01	BASE (THRUST RETAINER), FITTI	NG	M901B	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK B)	
	113	3-359-466-01	BELT (FR), SQUARE		M902A	X-3363-501-1	MOTOR ASSY (REEL) (DECK A)	
	114	3-575-321-00	RETAINER, THRUST, CAPSTAN		M902B	X-3363-501-1	MOTOR ASSY (REEL) (DECK B)	
	115	3-359-430-01	SPRING (CASSETTE RETAINER), LE	AF				

6-4. MECHANISM SECTION 2

(TCM-190RA12C) TCM-190RB22C)



Ref. No.	Part No.	Description	Remark		Ref. No.	Part No.	Description	Remark
151	X-3363-790-1	CHASSIS ASSY, MECHANICAL (DECK	(A)		159	3-359-429-01	SLIDER (BRAKE PLATE)	
151	X-3359-415-1	CHASSIS ASSY, MECHANICAL (DECK	B) .		160	3-359-420-01	GEAR (CAM GEAR)	
152	3-359-469-01	SPACER			161	3-359-456-01	SPRING (TRIGGER SPRING), TORSION	
* 153	3-359-425-01	SLIDER (REVERSE SLIDER)			162		LEVER (FR ARM) ASSY	
154	3-359-426-01	LEVER (REVERSE LEVER)			163		SPRING (FR ARM), TORSION	
* 155	3-359-427-01	SLIDER (LEVERSE SLIDER)			164	3-359-419-01	GEAR (FR GEAR)	
* 156	3-359-415-01	SLIDER (TRIGGER SLIDER)			165	3-359-421-01	CLUTCH (REEL DISK)	
157	3-359-448-01	GEAR (TRIGGER)			166		PULLEY (FR PULLEY)	
158	3-359-454-01	SPRING, TORSION					(
				'				

SECTION 7 ELECTRICAL PARTS LIST

MAIN

PANEL

CONTROL (A)

CONTROL (B)

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- RESISTORS

All resistors are in ohms
METAL:Metal-film resistor
METAL OXIDE:Metal Oxide-film resistor
F:nonflammable

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
 In each case, u:μ, for example:
 uA...: μA..., uPA...; μPA...,
 uPB...: μPB..., uPC...: μPC...,
 uPD...: μPD...
- CAPACITORS uF: μF
- COILS uH: μH

G : Germany IT : Italian

EA : Saudi Arabia AUS : Australian

EE: East European

When indication parts by reference number, please include the board name.

The components identified by mark \(\underbrace \) or dotted line with mark \(\underbrace \) are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque A sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifé.

Ref. No.	Part No.	Description			mark	Ref. No.	Part No.	Description			emark
*	A-2006-741-A	MAIN BOARD, CO	MPLETE (AEP,		- 1	C208	1-136-174-00	FILM	0.56uF	5%	50
		*******	*****			C209	1-136-171-00	FILM	0.33uF	5%	50
*	A-2006-742-A	MAIN BOARD, CO	MPLETE (E, EA	, AUS)		C210	1-126-059-11	ELECT	10uF	20%	50
		*********	*****			C212	1-126-162-11	ELECT	3. 3uF	20%	50
*	1-643-521-11	PANEL BOARD	•			C213	1-126-300-11	ELECT	0. 47uF	20%	50
*	1-643-523-11	CONTROL (A) BO	ARD			C214	1-126-059-11	ELECT	10uF	20%	50
		*******	***			C501	1-124-994-11	ELECT	100uF	20%	10
*	1-643-874-11	CONTROL (B) BO	ARD .			C502	1-124-994-11	ELECT	100uF	20%	10
		******	***		1	C503	1-126-059-11	ELECT	10uF	20%	50
						C504	1-126-301-11	ELECT	1uF	20%	50
*	3-377-119-01	HOLDER, LED									
*	4-942-204-01	PLATE, GROUND				C505	1-161-494-00	CERAMIC	0.022uF		25
	7-685-645-79	SCREW +BVTP	3X6 TYPE2	N-S		C506	1-126-161-11	ELECT	2. 2uF	20%	50
						C701	1-124-887-00	ELECT .	3300uF	20%	16
		< CAPACITOR >				C702	1-124-887-00	ELECT	3300uF	20%	16
						C703	1-126-101-11	ELECT	100uF	20%	16
C101	1-136-157-00	FILM	0. 022uF	5%	- 50V						
C102	1-126-059-11	ELECT	10uF 20%	50V (E,	EA, AUS)	C704	1-124-473-11	ELECT	1000uF	20%	10
C103	1-126-059-11	ELECT	10uF	20%	50V	C705	1-124-473-11	ELECT	1000uF	20%	10
C104	1-126-301-11	ELECT	1uF	. 20%	50V	C706.	1-126-161-11	ELECT	2. 2uF	20%	50
C105	1-162-294-31	CERAMIC	0.001uF	10%	50V	C707	1-124-472-11	ELECT	470uF	20%	10
						C708	1-126-301-11	ELECT	1uF	20%	50
C106	1-130-475-00	MYLAR	0.0022uF	5%	50V						
C107	1-130-475-00	MYLAR	0.0022uF	5%	50V	C711	1-126-161-11		2. 2uF	20%	50
C108	1-136-174-00	FILM	0. 56uF	5%	- 50V	C801	1-126-059-11		10 u F	20%	50
C109	1-136-171-00	FILM	0. 33uF	5%	50V	C802	1-162-288-31	CERAMIC	330PF	10%	50
C110	1-126-059-11	ELECT	10uF	20%	50V	C803	1-136-165-00	FILM	0. 1uF	5%	50
						C804	1-162-288-31	CERAMIC	330PF	10%	50
C112	1-126-162-11	ELECT	3. 3uF	20%	50V						
C113	1-126-300-11	ELECT	0. 47uF	20%	50V	C805	1-136-165-00	FILM	0. 1uF	5%	50
C114	1-126-059-11		10uF	20%	50V	C806	1-126-059-11		10uF	20%	50
C201	1-136-157-00		0. 022uF .	5%	50V	C807	1-126-059-11		10uF	20%	50
C202	1-126-059-11	ELECT	10uF 20%	50V (E, I	EA, AUS)	C808	1-161-494-00	CERAMIC	0. 022uF		25
						C809	1-124-994-11	ELECT	100uF	20%	10
C203	1-126-059-11		10uF	20%	50V						
C204	1-126-301-11	ELECT	1uF	20%	50V	C810	1-161-494-00		0. 022uF		25
C205	1-162-294-31		0.001uF	10%	50V	C811	1-161-494-00	CERAMIC	0. 022uF		25
C206	1-130-475-00	MYLAR	0. 0022uF	5%	50V			•			
C207	1-130-475-00	MYLAR	0.0 022uF	5%	50V						

MAIN PANEL CONTROL (A) CONTROL (B)

Ref. No.	Part No.	Descrip	otion	Remark	Ref. No.	Part No.	Desc	ription		Remark
		< CONNI	ECTOR >		10504	8-752-055-61 8-759-634-51		CXA1578P M5218AP		
* CN501	1-580-784-11	CONNECT	TOR, BOARD TO BOARD							
* CN502	1-580-784-11	CONNECT	TOR, BOARD TO BOARD			8-759-000-49			BCP (E. EA. AUS)	
* CN503	1-580-784-11	CONNECT	TOR, BOARD TO BOARD			8-759-945-58		RC4558P		
* CN504	1-566-858-41	SOCKET,	CONNECTOR 11P (SYSTEM	CONTROL 1)		8-759-061-69		M50964-3	302SP	
* CN701	1-566-859-11	SOCKET,	CONNECTOR 15P (SYSTEM	CONTROL 2)	10802	8-759-207-05	IC	TA7272P		
CN802	1-568-802-11	SOCK ET,	CONNECTOR 19P				< FI	LTER >		
* CN803	1-691-670-11	CONNEC	TOR, BOARD TO BOARD 5P		105101	1-236-087-11	CILT	ED I.VM E	2240	
* CN804	1-691-670-11	CONNEC	TOR, BOARD TO BOARD 5P			1-236-087-11				
* CN805	1-568-828-11	SUCKET,	CONNECTOR OF		LITZVI	1-200-007-11	1111	LII, LON I	7100	
* CN806	1-568-828-11	SUCKET,	, CONNECTOR 9P				< TR	ANSISTOR	>	
* CN901	1-568-862-11	SOCKET,	, CONNECTOR 19P							
* CN902	1-691-746-11	CONNEC	TOR, BOARD TO BOARD 5P		Q101	8-729-900-74			DTC143TS	
* CN903	1-691-746-11	CONNEC	TOR, BOARD TO BOARD 5P		0102	8-729-620-05			2\$C2603-EF	
					0201	8-729-900-74			DTC143TS	
		< DIOD	E >		0202	8-729-620-05			2SC2603-EF	
					Q501	8-729-900-61	TRAN	SISIOR	DTA114ES	
D501	8-719-987-63	DIODE	1N4148M		0500	9 700 000 00	TDAN	CLCTAD	DTC144ES (E. I	EA A110\
D701	8-719-200-77		10E2N		Q502	8-729-900-89			DTA144ES	LA, AUS)
D702	8-719-200-77		10E2N		Q505	8-729-900-65 8-729-141-83			2SB1094-LK	
D703	8-719-200-77		10E2N	1	0701	8-729-209-15				
D704	8-719-200-77	DIODE	10E2N		Q702 Q703	8-729-620-05			28C26O3-EF	
D707	8-719-933-33	DIODE	HZS6A1L					•		
D708	8-719-933-33		HZS6A1L		0704	8-729-209-15	TRAN	SISTOR	2SD2012	
D709	8-719-000-78		UZL-7L2		0705	8-729-620-05	TRAN	SISTOR	2SC2603-EF	
D710	8-719-987-63		1N4148M		0706	8-729-620-05	TRAN	SISTOR	2SC2603-EF	
D711	8-719-987-63	DIODE	1N4148M		Q801	8-729-900-89			DTC144ES	
					Q802	8-729-900-61	TRAN	SISTOR	DTA114ES	
D712	8-719-000-78		UZL-7L2		Q803	9720921ñ <i>A</i>	TRAN	SISTOR	2SA1317-STU	
D801	8-719-987-63		1N4148M	וועז	Q804	8-729-900-61			DTA114ES	
D802	8-719-987-63		1N4148M (AEP, G, IT, EE,	, (()	Q805	8-729-821-04			2SA1317-STU	
D803	8-719-987-63		1N4148M 1N4148M	;	Q806	8-729-821-04			2SA1317-STU	
D804	8-719-987-63	שטטוע	IN4140M		Q807				2SA1317-STU	
D805	8-719-987-63	DIODE	1N4148M							
			SEL2210S-C (HIGH)		0808	8-729-900-61	TRAN	ISISTOR	DTA114ES	
	8-719-301-38		SEL2210S-C (NORMAL)	1	. Q809	8-729-821-04			2SA1317-STU	
	8-719-301-38		SEL2210S-C (CD SYNCH)	Q810	8-729-900-61	TRAN	ISISTOR	DTA114ES	
D904	8-719-302-41		SEL2910A-C (A FWD)		0811	8-729-821-04	TRAN	ISISTOR	2SA1317-STU	
					Q812	8-729-821-04	TRA	ISISTOR	2SA1317-STU	
D905	8-719-302-41	LED	SEL2910A-C (A REV)							
D906	8-719-301-44	4 LED	SEL2410E-D (A STOP)		0813	8-729-900-61			DTA114ES	
D907	8-719-302-41	LED	SEL2910A-C (B FWD)		Q814	8-729-900-89			DTC144ES	
D908	8-719-302-41	1 LED	SEL2910A-C (B REV)		Q815	8-729-801-84			2SB1013-4	
D909	8-719-301-4	4 LED	SEL2410E-D (B STOP)	.	Q816	8-729-801-84			25B1013-4	
	. 740 000 11	1.50	CELODIDA A (DAHCE)		Q817	8-729-900-61	i ikal	191910K	DTA114ES	
D910	8-719-302-4		SEL2910A-C (PAUSE)	`	Q818	8-729-900-65	TRAI	ISISTOR	DTA144ES (E.	EA, AUS)
D911	8-719-301-38	5 LED	SEL2210S-C (REC)		Q819	8-729-900-61			DTA114ES	
		< 10 2			Q820	8-729-900-89			DTC144ES	
		\ IV /	•		4050					
10501	8-759-140-5	3 IC 1	uPD4053BC				< R	ESISTOR >	•	
	8-759-634-5		M5218AP (E, EA, AUS)							
	8-752-059-5		CXA1331S		R101	1-249-421-1	CAR	BON	2.2K 5%	1/4W

MAIN PANEL CONTROL (A) CONTROL (B)

	Part No.	Description			Remark	Ref. No.	Part No.	Description				Remark
R102	1-249-423-11		3. 3K	5%		R520	1-247-870-11		431	55	%	
R103	1-247-887-00		220K		· .	R521	1-249-433-11		221			1/4W (E, EA, AUS)
R104	1-249-421-11	CARBON			1/4W (E, EA, AUS)	R522	1-249-433-11					1/4W (E, EA, AUS)
R105	1-249-437-11	CARBON			1/4W (E, EA, AUS)	R524	1-249-417-11			55		1/4W
11 1 0 0	1 243 401 11	UNIDON		***	,, ,,, (e, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,	R525	1-249-429-11		101		%	1/4W
R106	1-249-417-11	CARRON	1 K	5%	1/4W		(2.0 120 17					., .,,
R108	1-247-842-11		3 K	5%	*.	R526	1-249-429-11	CARBON	101	59	%	1/4W
R109	1-249-423-11				1/4W	R527	1-247-858-11		131			1/4W
R110	1-249-428-11		8. 2K		1/4W	R528	1-247-862-11		201			1/4W
R111	1-249-434-11		27K	5%		R529	1-249-417-11		1 K			1/4W
NIII	1-245-454-11	CANDON	2111	070	17 411	R530	1-249-429-11		101			1/4W
R112	1-247-864-11	CARRON	24K	5%	1/4W	11000	1 240 420 11	ONIDOR			,,	17 711
R112	1-247-804-11		560		1/4W	R532	1-247-844-11	CARRON	. 3. 1	K 59	%	1/4W
R114	1-249-421-11		2. 2K		1	R701	1-249-413-11		470			1/4W
R115	1-249-431-11			5%	· .	R702	1-249-413-11		470		%	1/4W
R116	1-249-421-11		2. 2K			R703	1-249-422-11			K 59		1/4W
K110	1-249-421-11	CANDON	2. ZN	J/8	1/ 411	R704	1-247-858-11		131			1/4W
D117	1-249-429-11	CARRON	10K	50/	1/4W	11104	1 247 030 11	ONIDON	101		/0	17 411
R117	1-249-429-11		2. 2K			R705	1-249-429-11	CARRON	101	, ge	%	1/4W
R118		CARBON	2. 2K			R706	1-249-417-11		1 K		%	1/4W
R201			3. 3K			R707	1-247-850-11			2K 59		1/4W
R202	1-249-423-11		220K		1/4W	R708	1-249-422-11			K 59		1/4W
R203	1-247-887-00	CARBON	ZZUN	078	1/ 411	R709	1-249-429-11			(59		1/4W
D004	1 040 401 11	CARBON	2 24	E#/	1/4W (E, EA, AUS)	11103	1-243-423-11	ONIDON	101		/0	1/ 411
R204						R710	1-249-429-11	CAPPON	101	, 20	%	1/4W
R205	1-249-437-11				1/4W (E, EA, AUS)	R711	1-249-421-11			K 59		1/4W
R206	1-249-417-11		1K ·	5%		R711	1-249-432-11		. 181			1/4W
R208	1-247-842-11		3 K 3.3 K			R713	1-249-423-11			SK 59		1/4W
R209	1-249-423-11	CARDON	3. 3K	078	1/411	R714	1-249-433-11		221		%	1/4W
0010	1 040 400 11	CADBON	0 01/	E0/	1/4W	1114	1-245-400-11	CARDON	221	,	/8	1/ 4#
R210	1-249-428-11		8. 2K 27K	5%		°R715	1-249-435-11	CAPRON	331	, E	%	1/4W
R211	1-249-434-11					R716	1-249-405-11		101		% %	1/4W
R212	1-247-864-11		24K 560	5% 5%		R717	1-249-403-11			K 59		1/4W
R213	1-249-414-11		2. 2K			R801	1-247-903-00	011110 011	. · 1M		% %	1/4W
R214	1-249-421-11	CARDUN	Z. ZN	376	1/ 411	R802	1-249-429-11		101			1/4W
0015	1-249-431-11	CADDON	15K	5%	1/4W	NOU2	1-245-425-11	CARDON	101		/4	17 411
R215 R216	1-249-431-11		2. 2K			R803	1-249-425-11	CAPRON		1 K 50	W.	1/4W
R217	1-249-421-11		10K			R804	1-249-405-11		100		%	1/4W
			2. 2K		-	R805	1-249-393-11		10		%	1/4W
R218	1-249-421-11 1-249-405-11				1/4W		1-249-433-11					1/4W
KOUI	1-249-405-11	CANDON	100	JA	1/ 411	R807	1-249-433-11		221			1/4W
DEAG	1-249-405-11	CADDON	100	5%	1/4W	1,001	1 243 400 11	ONIDON	221	. 0,	rv	17 411
R502			27K	5%		R808	1-249-417-11	CARRON	1 K	59	%	1/4W
R503	1-249-434-11		10K	5%	1/4W	R809	1-249-433-11		221			1/4W
R504 R505	1-249-429-11		470	5%		R810	1-247-850-11			2K 59		1/4W
R506	1-249-413-11		24K	5%		R811	1-249-433-11		221			-1/4W
N 300	1-241-004-11	CANDON	241	378	1/ 4#	R812	1-249-430-11		121			1/4W
DE 10	1 240 420 11	CADDON	10 K	5%	1/4W	1012	1 243 400 11	OKIDON	121	` •	/4	17 411
R510	1-249-429-11				1/4W	R813	1-249-429-11	CARRON	101	(5	W.	1/4W
R511	1-249-429-11		10K 100K	5% 6%		R814	1-249-429-11		101			1/4W
R512	1-249-441-11				1/4W	R815	1-249-434-11					1/4W
R513	1-249-417-11		1K	5% 5%	1/4W 1/4W	R816	1-249-434-11					1/4W
R514	1-249-441-11	CARBUN	100K	J76	1/4W	R818	1-249-429-11					1/4W
D C 4 C	1 040 407 44	CADDON	6 0 h	E0/	1 / / W	NO 10	1-743-434-11	VANDUM	211	. 3	/0	1/ 411
R515	1-249-427-11		6.8K		1/4W	D010	1-249-429-11	CARRON	101	(59	W.	_1/4W
R516	1-249-413-11		470	5%	1/4W	R819	1-249-429-11			2K 59		_1/4\\ 1/4\\
R517	1-249-429-11		10K	5% 5%	1/4W	R820 R821	1-249-421-11			2K 59		1/4 W
R518	1-249-413-11		470	5%	1/4W ·	R822	1-249-421-11			7K 59		1/4 W
R519	1-249-431-11	CARBUN	15K	5%	1/4W	NOZZ	1-243-422-11	MNDUN	۷.	ra 3	/8	1/ 4स

MAIN PANEL CONTROL (A) CONTROL (B) MD-A

Ref. No.	Part No.	Descrip	tion			Remark	Ref. No.	Part No.	Description	Remark
R823	1-249-422-11	CARBON		2. 7.K	5%	1/4W	R910	1-249-409-11	CARBON 220 5%	1/4W
	1						R911	1-249-411-11	CARBON 330 5%	1/4W
R824	1-249-422-11	CARBON		2.7K	5%	1/4W	R912	1-249-413-11	CARBON 470 5%	1/4W
R825	1-249-425-11	CARBON		4.7K	5%	1/4W	2 0 0			
R826	1-249-433-11			22K	5%	1/4W	R913	1-249-415-11	CARBON 680 5%	1/4W
R827	1-249-429-11			10K	5%	1/4W	R914	1-249-417-11		1/4W
R828	1-249-413-11			470	5%	1/4W	R915	1-249-426-11		1/4W
N020	1-243-410 11	ONIDON		410	150	17 411	R916	1-249-430-11		1/4W
0000	1 040 411-11	CADDON		330	50/	1/4W	R917	1-249-421-11		1/4W
R829	1-249-411-11				5%		1,311	1-243-421-11	Z. 2K 376	1/ 411
R830	1-249-410-11			270		1/4W			A MARIARIE DECICEOR >	
R831	1-249-410-11		0.4	270	5%	1/4W			< VARIABLE RESISTOR >	
R832	1-249-408-11			180	5%	1/4W	Burrar		DED 101 01000H 10H	
R833	1-249-410-11	CARBON	4.5	270	5%	1/4W			RES, ADJ, CARBON 10K	
							RV201	1-241-630-11	RES, ADJ, CARBON 10K	· <u>·</u>
R834	1-249-410-11	CARBON	***	270	5%	1/4W				
R835	1-249-408-11	CARBON		180	5%	1/4W	***		< SWITCH >	
R836	1-249-410-11	CARBON		270	5%	1/4W				
R837	1-249-411-11	CARBON		330	5%	1/4W	\$901	1-572-378-11	SWITCH, SLIDE (DIRECTION)	
R838	1-247-895-00	CARBON		470K	5%	1/4W	\$902	1-572-378-11	SWITCH, SLIDE (DOLBY NR)	
37						4	\$903	1-554-303-21	SWITCH, TACTILE (A STOP)	
R839	1-247-895-00	CARBON		470K	- 5%	1/4W	\$904	1-554-303-21	SWITCH, TACTILE (A FWD)	
R840	1-247-860-11		4.	16K	5%	1/4W	\$905		SWITCH, TACTILE (A REV)	
	1-249-431-11			15K	5%	1/4W			(11 1121)	
R842	1-249-425-11			4. 7K		1/4W	\$906	1-554-303-21	SWITCH, TACTILE (B REW)	
				20K	5%	1/4W	\$907		SWITCH, TACTILE (B FF)	
R843	1-247-862-11	CANBON		201	370	17411			SWITCH, TACTILE (B REC)	
	4 4 4 7 4 4 4 4 4	0.4.0.0.0.11		0.01/	E0/	4 / 400	\$908			20550)
R844	1-247-862-11			20K	5%	1/4W	\$909		SWITCH, TACTILE (DUB HIGH S	
R845	1-249-425-11			4. 7K		1/4W	\$910	1-554-303-21	SWITCH, TACTILE (DUB NORMAL	Z SPEED)
R846	1-249-415-11	CARBON		680	5%	1/4W				
R847	1-249-429-11	CARBON		10K	5%	1/4W	\$911		SWITCH, TACTILE (CD SYNCHRO	0)
R848	1-249-415-11	CARBON		680	5%	1/4W	\$912		SWITCH, TACTILE (B STOP)	
			1.	1 5 5 9		* ***	\$913	1-554-303-21	SWITCH, TACTILE (B PAUSE)	
R849	1-249-429-11	CARBON	Page 1	10K	5%	1/4W	\$914	1-554-303-21	SWITCH, TACTILE (B FWD)	
R850	1-249-429-11	CARBON	1. 7. 4. 4.	10K -	5%	1/4W	\$915	1-554-303-21	SWITCH, TACTILE (B RVS)	
R851:	1-249-437-11	CARBON		47K	5%	1/4W				
R852	1-247-866-11	CARBON		30K	5%	1/4W	\$916	1-554-303-21	SWITCH, TACTILE (B REC MUTE	E)
R853	1-247-866-11		344	30K	5%	1/4W	\$917	1-554-303-21	SWITCH, TACTILE (A REW)	
							\$918	1-554-303-21	SWITCH, TACTILE (A FF)	
R854	1-249-437-11	CARBON		47K	5%	1/4W	4			
R855	1-247-872-11			51K	5%	1/4W			< VIBRATOR >	
R856	1-247-872-11			51K	5%	1/4W			*	
	1-247-872-11			51K	5%	1/4W	V801	1_577_358_21	VIBRATOR, CERAMIC (4MHz)	
R857			15	51K	5%	1/4W			********	
R858	1-247-872-11	CANDON	11. 2. 2. (2.)			1/ 411	*******	******	********	
2050					FO/			A 0000 000 A	ND A BOARD COMPLETE	
R859	1-249-405-11			100	5%	1/4W	*		MD-A BOARD, COMPLETE	
R860	1-249-405-11					1/4W	- 2		******	
R899	1-249-393-11	CARBON			5%	1/4W				
R901	1-249-407-11	CARBON		150	5%	1/4W			< CAPACITOR >	
R902	1-249-409-11	CARBON		220	5%	1/4W				
21:	3.5		3657 46		· •	parts out or	C11	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
R903	1-249-411-11	CARBON		330	5%	1/4W	C12	1-136-157-00	F1LM 0. 022uF	5% 50V
R904	1-249-413-11			470	5%	1/4W	C13	1-124-234-00	ELECT 22uF	20% 16V
R905	1-249-415-11			680	5%	1/4W	C18		CERAMIC CHIP 100PF	5% 50V
R906	1-249-417-11			1K	5%	1/4W	C21		CERAMIC CHIP 390PF	5% 50V
R907	1-249-420-11			1. 8K		1/4W		3**		
ngu/	1-249-420-11		17.00		0/0	1/ 48	C22	1-136-157-00	FILM 0.022uF	5% 50V
					50/	1/4W		1-124-234-00		20% 16V
	1-249-424-11				5%	1/4W		1-163-117-00		5% 50V
R909	1-249-407-11	VARDUN		130	3/0	ा/ 4स	020	- 1 100-111-00	VENTINI VIIII JUVEE	570 UUV

MD-A MD-B

Ref. No.	Part No.	Description			ark.	Ref. No.	Part No.	Description			mark
C31	1-124-234-00	ELECT 22ul	F	20%	16V	*		MD-B BOARD, COM	APLETE		
C32	1-124-234-00	ELECT 22ul	F	20%	16V			*********			
C72	1-124-499-11	ELECT, NONPOLAR 1uf		20%	50V	1					
								< CAPACITOR >			
		< CONNECTOR >				1					
						C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
k CNJ31	1-580-782-11	CONNECTOR, BOARD TO	BOARD			C12	1-136-157-00	FILM	0. 022uF	5%	50V
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4				C13	1-124-234-00		22uF	20%	16V
* CNP32	1-580-772-11	PIN, CONNECTOR (PC	OARD) 4P)		C14	1-136-273-91		75PF	5%	630V
* CNP71	1-564-719-11	PIN, CONNECTOR (SMAL	L TYPE)	3P		C15	1-164-080-11	7.00	390PF	10%	50V
						}					•••
		< 1C >				C17	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
						C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
1031	8-759-106-02	IC uPC4570G2				C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
						C22	1-136-157-00		0. 022uF	5%	50 V
		< CHIP JUMPER >				C23	1-124-234-00		22uF	20%	16V
						}				2070	101
JW1	1-216-295-00	METAL CHIP 0	5%	1/10W		C24	1-136-273-91	FILM	75PF	5%	630V
JW51	1-216-296-00	METAL CHIP 0		1/8W		C25	1-164-080-11		390PF	10%	50 V
JW52	1-216-296-00	METAL CHIP 0	5%	1/8W		C27	1-163-103-00	CERAMIC CHIP	27PF	5%	50 V
JW53	1-216-296-00	METAL CHIP 0		1/8W		C28		CERAMIC CHIP	100PF	5%	50 V
JW54	1-216-296-00	METAL CHIP 0.		1/8W		C31	1-124-234-00		22uF	20%	16V
				•		1			2241	2070	101
		< TRANSISTOR >				C32	1-124-234-00	ELECT	22uF	20%	16V
						C33	1-124-234-00		22uF	20%	16V
071	8-729-602-36	TRANSISTOR 2SA1602				C51		CERAMIC CHIP	0.0068uF	10%	50V
						C52		CERAMIC CHIP	0. 0068uF	10%	50V
		< RESISTOR >				C53		CERAMIC CHIP	0. 012uF	10%	50V
R11	1-216-099-00	METAL CHIP 120K	E0/	1/10W		054	1 100 550 44	51111			
R12	1-216-025-00			1/10W		C54	1-136-559-11		0.0047uF	5%	630V
						C56		CERAMIC CHIP	2. 2uF		16V
R13	1-216-100-00			1/10W		C57		CERAMIC CHIP	1uF		16V
R14	1-216-067-00			1/10W		C58		CERAMIC CHIP	0. 018uF	10%	50V
R21	1-216-099-00	METAL CHIP 120K	5%	1/10W		C72	1-124-499-11	ELECT, NONPOLAR	1uF -	20%	50 V
R22	1-216-025-00	METAL CHIP 100	5%	1/10W		1.3		< CONNECTOR >	×.		
R23	1-216-100-00	METAL GLAZE 130K	5%	1/10W							
R24	1-216-067-00	METAL CHIP 5. 6K		1/10W		* CNJ31	1-580-782-11	CONNECTOR, BOAR	D TO BOARD		
R31	1-216-033-00	METAL CHIP 220		1/10W				CONNECTOR, BOAR			
R32	1-216-033-00	METAL CHIP 220	5%	1/10W	-	7		SOCKET. CONNECTO			
					-			PIN. CONNECTOR		P	
R71	1-216-082-00	METAL GLAZE 24K	5%	1/10W	1			PIN. CONNECTOR			
R72	1-216-081-00			1/10W	4	T VIII I	1 004 115 11	TIM, COMMESSION	(OWALL TITE)	.01	
R73	1-216-089-00			1/10W				< DIODE >			
R74	1-216-089-00			1/10W				(DIODE)			
	. 2.0	merice offi	070	.,		D31	8-719-988-62	D10DE 188355			
		< VARIABLE RESISTOR	>					10000			
	3.				8			< 1C >			
RV11	1-238-012-11	RES. ADJ, CARBON 1K									
		RES, ADJ, CARBON 1K			2.1	1031	8-759-106-02	IC uPC4570G2			
		RES, ADJ, CARBON 10K						3. 7.7.7.72			
RV72		RES, ADJ, CARBON 10K	+		:			< CHIP JUMPER >			
		*******		*****	***			. JIII JOINI LA /			
						JW1	1-216-296-00	METAL CHIP	0 5%	1/8W	No
					1	JW2	1-216-295-00		0 5%	1/10W	
	41					JW3	1-216-295-00		0 5%	1/10W	
					i	JW4					
					.,		1-216-295-00		0 5%	1/10W	
					Í	JW5	1-216-295-00	METAL CHIP	0 5%	1/10W	

MD-B SW-A SW-B

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description	Remark
JW6	1-216-295-00	METAL CHIP.	0	5%	1/10W			< VARIABLE RESISTOR >	
JW7	1-216-295-00	METAL CHIP	0	5%	1/10W				
JW52	1-216-296-00	METAL CHIP	0	5%	1/8W	RV11	1-238-012-11	RES, ADJ. CARBON 1K	
JW53	1-216-296-00		0	5%	1/8W	RV12		RES. ADJ. CARBON 220K	
JW54	1-216-296-00		0	5%	1/8W	RV21		RES, ADJ, CARBON 1K	
31104	1 210 230 00	METAL OITH		V/V	1, 011	RV22		RES. ADJ. CARBON 220K	
INCE	1 010 000 00	METAL CHID	0	5%	1/8W	RV71		RES, ADJ, CARBON 10K	
JW55	1-216-296-00		1		•	WALL	1-236-010-11	NES, ADS, CARBON TOR	
JW56	1-216-296-00		0	5%	1/8 W		4 000 040 44	D50 ID: 04000W 40%	
JW57	1-216-296-00		0	5%	1/8W	RV72	1-238-016-11	RES. ADJ. CARBON 10K	
JW58	1-216-296-00	METAL CHIP	0	5%	1/8W	ł			
J W 59	1-216-296-00	METAL CHIP	0	5%	1/8W			< RELAY >	
JW60	1-216-296-00	METAL CHIP	0	5%	1/8W	RY31	1-515-726-11	RELAY	
JW6 1	1-216-296-00		0	5%	1/8W				
	1 210 200 00							< COIL >	
		< COIL >				1			
						T51	1-406-419-11	COIL, BIAS OSCILLATION	
L11	1-410-780-11	INDUCTOR	27mH			******	*****	*********	*****
L21	1-410-780-11	INDUCTOR	27mH			Tall.			
	, , , , , , , , , , , , , , , , , , , ,	2				*	1-634-841-14	SW-A BOARD	
		< TRANSISTOR	>					*****	
				_					
051	8-729-808-01	TRANSISTOR	2SD1622-	·S		2	3-343-419-01	HOLDER (S SENSER A)	
Q52	8-729-808-01	TRANSISTOR	2SD1622-	S					
Q53	8-729-808-01	TRANSISTOR	2SD1622-	·S				< CONNECTOR >	
.071	8-729-602-36	TRANSISTOR	2SA1602			ł			
10						* CNP81	1-568-852-11	SOCKET, CONNECTOR 9P	
		< RESISTOR >				1			
								< IC >	
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W	1			
R12	1-216-025-00	METAL CHIP	100	5%	1/10W	1081	8-719-710-03	DIODE NJL5165K-B	
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W	1			
R14	1-216-067-00		5.6K	5%	1/10W	1		< RESISTOR >	
R15	1-249-430-11		- 12K	5%	1/4W	1		· · · · · · · · · · · · · · · · · · ·	
NIO	1 243 400 11	ONNOON	. 121	070	17 411	R84	1-249-417-11	CARBON 1K 5%	1/4W
0.0.1	1-216-099-00	METAL CUID	120K	E%	1/10W	R85	1-249-408-11		1/4W
R21	, - , , , , , , , ,				•	NO J	1-243-400-11	CARDON 100 376	17 4#
R22	1-216-025-00		100	5%	1/10W)		· OWITOU >	
R23	1-216-100-00		130K	5%	1/10W	1		< SWITCH >	
R24	1-216-067-00	METAL CHIP	5. 6K	5%	1/10W				
R25	1-249-430-11	CARBON	12K	5%	1/4W	\$81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP)	
						\$82	1-571-281-21	SWITCH, LEAF (70EQ)	
R31	1-216-033-00	METAL CHIP	220	5%	1/10W	\$86	1-571-281-21	SWITCH, LEAF (HALF)	
R32	1-216-033-00		220	5%	1/10W			*********	*****
R41	1-249-393-11		10	5%	1/4W		9		
			10	5%	1/4W	*	1-634-841-14	SW-B BOARD	
R42	1-249-393-11					•	1.034-041-14		
R51	1-216-075-00	METAL CHIP	- 12K	5%	- 1/10 W -	140		*****	
R52	1-216-075-00	METAL CHIP	12K	5%	1/10W	1	3-343-419-01	HOLDER (S SENSER A)	
R53	1-216-073-00		. 10K	5%	1/10W				
R54	1-216-309-00		5. 6	5%	1/10W	1		< CONNECTOR >	
					1	-		· OVALLEVIOR /	
R55	1-216-309-00		5.6	5%	1/10W	# DND04	1 ECO DED 44	COCKET CONNECTOR OF	
R56	1-216-298-00	METAL CHIP	2. 2	5%	1/10W	* UNPO!		SOCKET, CONNECTOR 9P	
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W			< 1C >	
R72	1-216-081-00		22K	5%	1/10W				
R73	1-216-089-00	,	47K	5%	1/10W	1081	8-719-710-03	DIODE NJL5165K-B	
						1001	0 119 110-00	DIODE HOLDIOOK D	
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W	1			

SW-B

Ref. No.	Part No.	Descrip	Rem	Remark			
		< RESIS	TOR >				
R81 R82 R83 R84 R85	1-249-414-11 1-247-818-11 1-247-834-11 1-249-417-11 1-249-408-11	CARBON CARBON CARBON		560 300 1.3K 1K	5% 5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W	
		< SWITC	H >				
\$81 \$82 \$83 \$84 \$85	1-571-958-11 1-571-281-21 1-571-281-21 1-571-281-21 1-571-281-21	SWITCH, SWITCH, SWITCH,	LEAF LEAF	(70EQ) (METAL) (REC A)	(STOP)		
	1-571-281-21				*****	*****	****

MISCELLANEOUS

57	1-590-237-11	WIRE, FLAT	TYPE (19 CORE)	
71	1-690-906-11	WIRE (FLAT	TYPE) (9 CORE)	
121	1-638-983-11	MOTOR FLEX	(IBLE BOARD	
HP901	A-2003-837-A	BASE ASSY,	HEAD (PB) (DECK A)	
HRPE90	1A-2003-838-A	BASE ASSY,	HEAD (REC/PB/ERASE) (DECK E	3)
M901A	X-3359-417-1	MOTOR ASSY	(CAPSTAN) (DECK A)	
M901B	X-3359-417-1	MOTOR ASSY	(CAPSTAN) (DECK B)	
M902A	X-3363-501-1	MOTOR ASSY	(REEL) (DECK A)	
M902B	X - 3363 - 501 - 1	MOTOR ASSY	(REEL) (DECK B)	

ACCESSORIES & PACKING MATERIALS *****************************

* 3-350-154-01 CUSHION 4-920-940-01 SHEET (A), PROTECTION

HARDWARE LIST

- #1 7-685-646-79 SCREW +BVTP 3X8 TYPE2 N-S #2 7-685-645-79 SCREW +BVTP 3X6 TYPE2 N-S
- #3 7-621-773-93 SCREW (PANEL 2.6 TP2)
- #4 7-621-775-00 SCREW +B 2.6X3
- #5 7-627-556-08 SCREW +P 2.6X2.8